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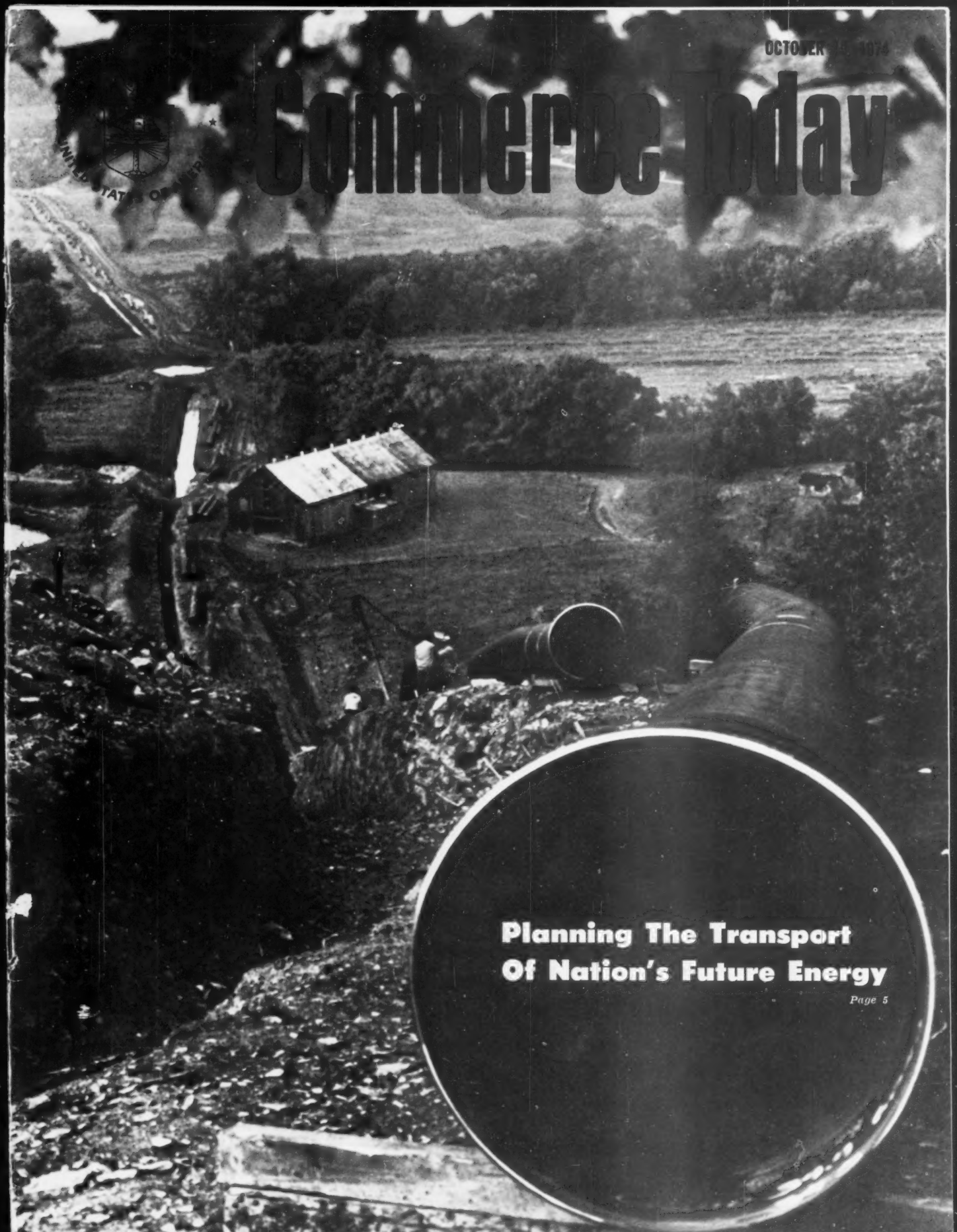

Planning The Transport Of Nation's Future Energy

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FROM THE SECRETARY

Seizing An Energy Opportunity

This column was written by Under Secretary of Commerce John K. Tabor.

Underwater parachutes or propellers to harness the power of the ocean currents as a new energy source? This seems to be a vision in the best Jules Verne tradition.

Yet these are some of the possibilities being seriously discussed by no-nonsense scientists and engineers, led by Dr. Harris B. Stewart of Commerce's National Oceanic and Atmospheric Administration.

Dr. Stewart, Dr. John Apel, also of NOAA, and Dr. William S. von Arx of Woods Hole Oceanographic Institution, first thought of the idea of tapping the power of the ocean as a fuel-free, non-polluting energy source last year after completing an oceanographic study of the Florida Current, a section of the mighty Gulf Stream.

The idea itself wasn't that new. There had been speculation in the past about utilizing the swift-moving Current as a potential treasury of useable energy. But it was speculation of an idle nature as little as five years ago for our supplies of fossil fuels on land had seemed not only adequate but inexhaustible. Then came an awakening about our environmental problems, followed fast by the energy crisis.

That made the whole idea more than an interesting curiosity to be surfaced perhaps at some future scientific seminar.

There was the Florida Current, carrying more than 50 times the total flow of all the freshwater rivers of the world, coursing right past Miami's front door. If only a little—say 4 percent—of the energy generated by the Current could be trapped, the power output might be between 1,000 and 2,000 megawatts—the equivalent of a nuclear power plant.

This is the slide rule calculation that the oceanographers came up with. But, they wondered, could it be done? Was there a practical and economical way to harness the Florida Current?

They decided to find out. At Dr. Stewart's invitation, the group was expanded to include ocean engineers, heavy marine equipment specialists, turbine design engineers, corrosion and fouling experts, and energy economists. The brainstorming sessions of the group produced one clear conclusion: the Florida Current could be harnessed.

But how would you apply the harness to gather the power? Two of the more ingenious suggestions would be to use a string of parachutes arranged in an underwater ellipse along the lines of a conveyor belt, or to try underwater "windmills," catching the Current the way windmills do the wind. There were other ideas for extracting the untapped energy: using conventional turbines; vertical, eggbeater-like propellers; rotors with cupped blades.

Then the brainstormers had to examine such questions as the stresses that would be placed on an underwater structure, by the Current itself, by storms such as hurricanes, by gnawing, erosive minerals in the sea, and, finally, how and in what form could the collected energy be transferred to shore for delivery to customers:

—by converting it to compressed air to be piped ashore to drive an electric turbine?

—by using the energy on site to extract hydrogen—a highly efficient, clean fuel—from seawater?

All of these questions and many more were given consideration. At no time did someone complain, "That's too far out; let's stick to things we've done before and know we can do again." Then, not all at once, not every idea a good one, not without a lot of hard analysis, it all began to fall into focus. There's still a lot of work ahead, at least a year's study of the myriad details to be considered. But the group feels that if the study results are encouraging, design of an experimental system could begin, laboratory tests conducted, and then ocean tests of a pilot model that could usher in a new energy source from the sea.

Energy from the Gulf Stream will not come next year and may not be available in the next decade, but the opportunity is there to be seized. The subject is indicative of how basic research and applied science—given the necessity of circumstance—can lead us to new technologies for solving our energy problems, as well as other problems imposed upon us by an increasingly complex world.

John K. Tabor

Commerce Today

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COVER: *Project Independence will require construction of extensive new pipeline systems for transport of oil and gas from newly-found sources throughout the country. The article beginning on page 5 reports on the transportation requirements of other energy-producing materials to make the U.S. self-sufficient.*

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Productivity Decelerates During Slowdown; Short-Term Changes Tied To Growth Rate

Economic Highlights is prepared by the Office of the Assistant Secretary for Economic Affairs.

Productivity can be a powerful antidote for inflation, but it cannot be applied at will, and at times results can be rather discouraging over the short term. Changes in output per manhour have been zero or negative since early 1973 except for a slight increase in the second quarter of this year.

The recent experience is not due to some sudden loss of efficiency on the part of American workers. Short-term productivity changes are closely related to total production of goods and services, as the first chart on the opposite page illustrates. During the rapid-growth period of 1972 and early 1973, quarterly increases in productivity ranged from 3.6 to 6.5 percent on an annual rate basis. In the five most recent quarters, when the economy began growing more slowly and then declined, the change in productivity has ranged from a minus 7.1 percent to an increase of only 1.4 percent.

Significantly increasing output per manhour over a short period of time can be a very difficult task, and it is only rarely that an individual worker, acting alone, can make much headway in a highly organized society. A tailor might speed up his production by his own efforts, but the worker in a garment factory is not likely to have a great impact on volume of output unless the company improves its machinery, its processes or its organization.

Upward pressure

If a worker could produce significantly more goods or services in the same number of hours either higher wages, higher profits or lower prices would result—and possibly all three. If wages rise with little or no increase in productivity, however, the cost of each good or service increases, and this exerts upward pressure on prices. Nonlabor costs, depreciation, interest and taxes also tend to rise over time, and these add further steam to inflationary pressures.

Certainly a crucial difficulty in the current situation is the demand by labor for large wage increases during a period when productivity is either declining or increasing only slightly. Workers have been eyeing recent increases in the cost of living, and they are arguing for "catch-up" wage increases to compensate for the period of wage-price controls, when wage increases were relatively low but prices, at least in the latter stages, rose rapidly.

Productivity is usually measured in terms of the number of manhours required to produce all the goods and services in the private economy, government excluded. However, the averages mask a great variety of continuous changes in productivity; and they tell very little about multitudinous factors, some of which are peculiar to an industry, a company, or a job.

Over the years, capital investment has been an extremely important factor in productivity increases although education, training and experience of the work force in utilizing capital are corollary ingredients. In farming, for example, machines have boosted output per manhour continuously in this century, faster than in any other major sector, and farm production has increased while the number of persons working on farms has dropped steadily.

In the short run, however, weather can be the single most important factor in farm productivity. A drought or freeze may cut a farmer's average output per hour drastically since he will probably put in about the same number of hours for a much smaller return in total production.

Increasing productivity is even more elusive for the worker in a service industry. The productivity of a jetliner pilot may fluctuate daily because of circumstances beyond his control. His productivity would be cut in half if he has 80 commercial passengers one day and 40 the next. His education, experience, training and skill will have little bearing on his productivity if he must wait for other planes to take off or land, or if he is required to take a longer route because of rough weather.

Underlying factor

The United States generally has had lower increases in productivity in the manufacturing sector than other major industrialized nations. One underlying factor may be the already high level of capital investment per worker in the United States in comparison with other nations. Productivity in the U.S. manufacturing sector rose at an annual rate of 3.3 percent from 1960 to 1973 while 11 other industrial countries (nine European countries, Canada and Japan) averaged 6.3 percent.

Japan has enjoyed an extremely high rate of productivity increase in recent years. The rate has averaged 10.7 percent from 1960 to 1973 in manufacturing. In 1973, output per manhour in manufacturing jumped 18 percent. However, this did not bring about a reduction in inflationary pressures. Hourly compensation increased even more, 24.5 percent, and unit labor costs rose 5.3 percent.

Productivity increases hold the key to long-run prosperity and price stability but offer little help as a policy tool for dealing with short-run problems. In the short-run, high levels of output are the key, and the resultant productivity gains are the mechanism by which upward pressures on prices can be reduced.

PERCENT CHANGE

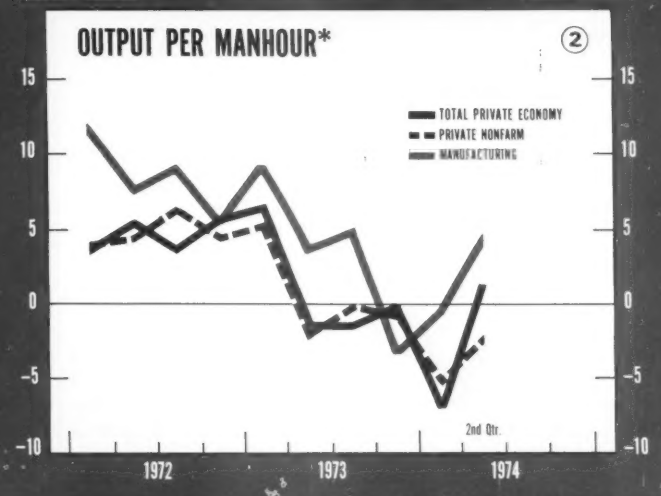
PERCENT CHANGE

OUTPUT AND LABOR PRODUCTIVITY* ①

PERCENT CHANGE

PERCENT CHANGE

OUTPUT PER MANHOUR* ②



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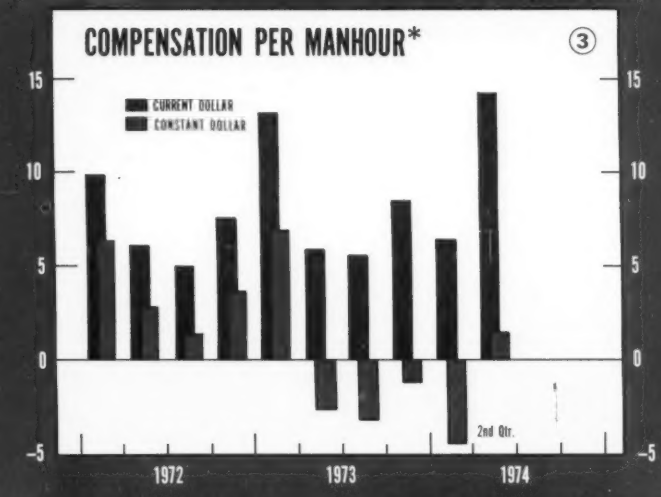
COMPENSATION PER MANHOUR* ③



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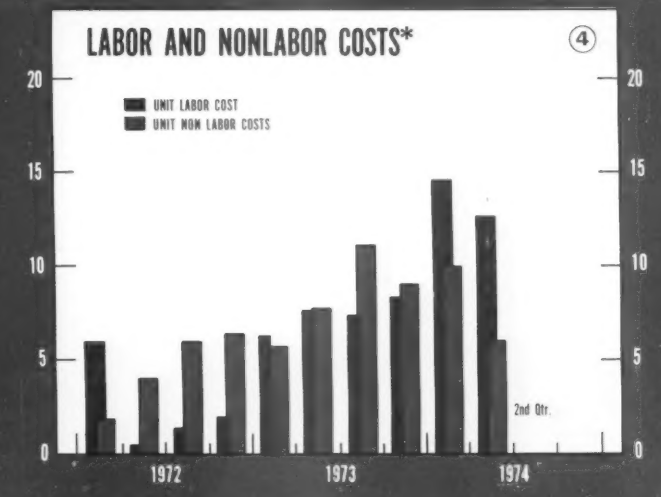
LABOR AND NONLABOR COSTS* ④



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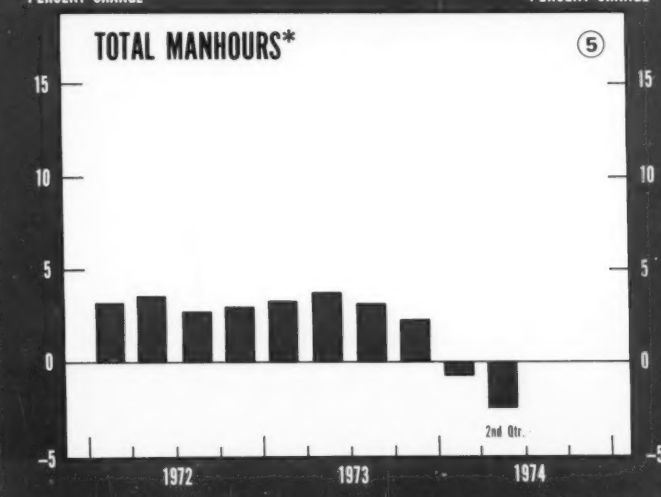
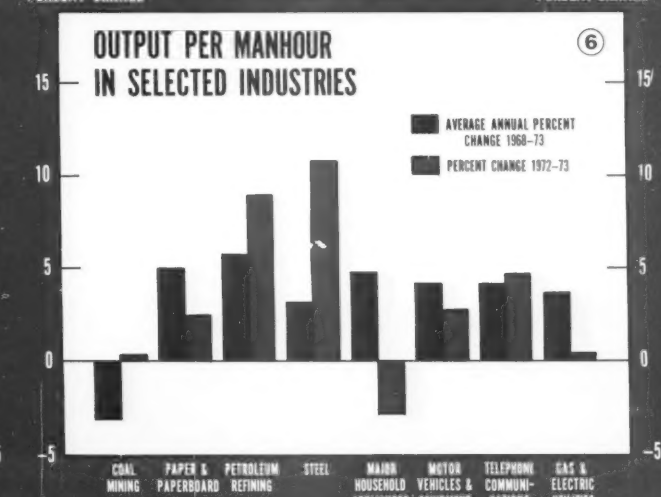
TOTAL MANHOURS* ⑤



PERCENT CHANGE

PERCENT CHANGE

OUTPUT PER MANHOUR IN SELECTED INDUSTRIES ⑥



All quarterly data seasonally adjusted.

*Quarterly percent change at annual rates.

All data for total private economy except where specified.

Newsmemo

The exodus from the farm may be ending. The long slide in the U.S. agricultural population appears to have reached a trough. The last four annual counts by the Census Bureau gave the proportion of U.S. population on farms at 4.8 percent in 1970, 4.6 percent in 1971 and 1972, and 4.5 percent in 1973. And the percentages may be even more level, since sampling variability is reflected in these figures. It is the first sign of farm population stability since the mid-1940s, when returning veterans and defense workers temporarily checked the flow to the cities and suburbs.

The site of a wreck becomes the topic of a public hearing next month. The wreck was that of the U.S.S. Monitor, which went down off Cape Hatteras after its historic fight with the C.S.S. Virginia (or Merrimac, as many know it). The State of North Carolina has nominated the new-found site to be the nation's first marine sanctuary, to safeguard the vessel and control research there. Commerce's Office of Coastal Zone Management is reviewing the nomination--for environmental impact, among other aspects. The public gets a chance to help with the decision at a Nov. 5 hearing at the I.E. Gray Library, Duke University Marine Laboratory, Piveres Island, Beaufort, N.C.

At least one group of U.S. consumers is not slackening its purchasing pace in the face of rising prices. The nation's beer drinkers, undeterred, have increased the amount of beer purchased by 5.6 percent in the first half of 1974 compared to last year, and the July volume went up 14.3 percent over the comparable 1973 total. Normal growth in sales volume has been 4 to 4.5 percent in recent years. Price trends in beer wholesaling showed an average increase of less than 1.5 percent annually in the past ten years, but a sharp upward veer of 9.1 percent since 1974 began, due to rising costs of raw materials and packaging.

World demand for sugar exceeds production, and remains strong despite higher prices. The result is an increase in industrial sugar prices of 175 percent in September above January levels. Retail prices are tripling in a year. There are reports of hoarding and unofficial retail rationing in southeastern U.S. and in Britain. Some industrial sugar users are shifting to corn sweeteners and artificial sweeteners to offset the price increases. Hurricane Carmen added to the production pinch when it struck at Louisiana's crop; the loss, however, was but a small portion of the U.S. total.

Inflation is undermining the catalog sales method. Houseware manufacturers, offering such products as kitchen utensils, pots, pans, and electric appliances, will no longer guarantee prices in catalogs used by catalog showroom operators. Rapid metal price increases have forced houseware makers to limit catalog price guarantees to a few months rather than the life of the catalog as has been traditional. Showroom operators are hoping that fall catalog prices will hold through the Christmas season, when 75 percent of annual sales occur.

Kama times two. The widely-publicized Soviet heavy duty truck plant on the Kama River, due to begin production early next year, used about $400 million in U.S. production equipment and engineering services. Another truck plant, in Siberia, is now on the USSR drawing boards. There are reports that the Soviets expect to spend about $800 million for U.S. equipment and engineering services in building the second facility. The Kama River plant, at full production, will turn out 150,000 trucks per year. The USSR's 1971-75 Five Year Plan aims at production of 765,000 trucks annually.

Quick quiz, for a Confederate dollar: does the Mason-Dixon Line run east-west between Maryland and Pennsylvania? Only partly true, for it turns north-south to separate Maryland and Delaware, too. When Mason and Dixon were surveying, Pennsylvania had three southern appendage counties; later they became the State of Delaware. Commerce's National Geodetic Survey is helping Maryland and Delaware reestablish the largely-forgotten 82-mile stretch. This means replacing 15 of the original limestone border monuments --set one mile apart--and putting five others back into line.

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October 14, 1974

Project Independence Planners Ponder Added Transport Needs

Among the major problems facing Project Independence planners is how to handle the increased output of energy-producing materials which they are trying to bring about. Once the raw materials are out of the ground, an improved transportation net will be required to get them where they're needed.

The Federal Energy Administration lists four principal modes of coal transport: railroads, pipelines, waterways, and trucks. In the case of coal, railroads and coal slurry pipelines may provide the key to rapid, efficient, and economically feasible transportation.

Coal transport—rail. Approximately 80 percent of all the coal transported in the United States is moved by rail, and coal transport accounts for about 11 percent of total rail revenue freight tons. The average length of a coal haul is 295 miles, and most of the coal produced in a region is consumed in the same region.

Two widely used methods for shipping coal are single car lot movement and unit train movement. Single car lot movement of coal is the incorporation of small numbers of coal cars into a mixed freight train. In all likelihood, these trains will make several stops before reaching a final destination.

The most efficient movement of coal for major consumers is by unit trains, which may carry 10,000 tons or more from a single source to a single destination. They run directly from mine to utility, are loaded and unloaded mechanically for rapid turnaround, and require only a four-man crew. The use of unit trains entails substantial investment in loading and unloading facilities. These investments will be economical only if frequent volume coal shipments are to be processed. Long term contracts would greatly improve the outlook for major investments and would thereby help to maximize the efficiency of coal movement.

There are several potential obstacles to substantially increasing coal transportation: coal handling capabilities, carrying capacities, road operations, resource availability, environmental constraints, oil competition, and present freight rate structures.

It is generally accepted that future long-distance movement of western coal must be by unit train if it is to be economically feasible. This implies a substantial upgrading of loading facilities at major mineheads. In addition, the present coal grading system yields 150 separate types of coal, which increases handling costs and thwarts

MOVING IT—*All segments of the nation's energy transportation net will be reevaluated in trains, oil pipelines and tankers as new energy sources are developed.*

unit train assembly and efficient movement.

Difficulties will also be encountered if storage facilities at destination points are not improved to reduce cycle times of coal cars. A reduction in cycle time would remove some of the pressure to invest in rolling stock.

Certain options could help alleviate the problem of increasing coal transportation by rail. The most important would be to foster enhanced coal production and consumption on a long-term basis. Physical handling and marketing patterns that are conducive to volume operations must also be developed. These may include a more efficient utilization of cars, motive power and crews, the placing of financial penalties on small volume movements, diversion and reconsignment of cars without precise forwarding instructions; and the encouragement of rapid, large-scale train-loading by financial incentives.

A move could be made requiring utilities to develop rapid unloading equipment and sufficient storage facilities to handle train-load lots.

Approaching the same problem from a different perspective, support could be given for innovative rate and service plans which would improve efficiency and reliability.

Coal Transport—Slurry Pipeline. At the present time, only one coal-slurry pipeline, the Black Mesa line in Arizona, is in operation. However, a total of approximately 3,000 miles of line have been proposed, originating in Wyoming, Colorado, New Mexico, and Arizona.

Slurry pipelines are used for the transport of solid materials in water. Solid particles of coal are kept in suspension by a turbulent flow of water. However, the success of the operation depends on the size of the particle, the velocity of the flow, and the particle concentration.

Slurry pipelines become financially competitive with high voltage electric transmission at quantities of three million tons a year and pull ahead of railroads at ten million tons or more.

The practical operating velocity of the pipeline flow is between three and six feet per second. Slower speeds may cause solid particles to settle out and drag along the bottom causing uneven wear conditions. Slower speeds may also eventually cause pipeline clogging. Pumping stations are usually from 40 to 80 miles apart, depending on the terrain. Slurry pipeline capacity can be increased (as can that of oil and gas lines) by looping—the laying of parallel line over part of the distance between pumping stations to reduce pressure drop and permit faster movement throughput. However, a looped line never performs with the efficiency of a properly-sized single line.

Aside from possible material shortages for pipeline construction, two major obstacles stand in the way of increasing coal line capacity; one is the lack of the right of eminent domain. Considerable controversy exists over whether this right should be granted, but legislation favoring slurry pipelines has been prepared. However, the use of the right of eminent domain must be limited, to prevent unnecessary usage.

The second slurry problem relates to water requirements for the operation of a coal slurry. At a 50 percent concentration, each ton of coal requires 250 gallons of accompanying water. Thus, shipping 10 million tons of coal per year would export nearly 7 million gallons of water a day from the coal producing regions. Some consideration has been given to the possibility of using another pipeline to transport water to the coal source for mixing with the coal for slurry. Conceptually, this water can then be used by the power plant at the end of the pipeline. Transport costs would rise substantially, but by less than double, as a result of the technique.

Oil and gas—pipeline and tanker. Pipelines carry nearly all natural gas plus about 57 percent of petroleum ton miles. Major oil pipeline routes extend from Texas and the Gulf up to the Middle Atlantic and North Central States. The network is sparse elsewhere. Gas pipelines generally follow the same routes. Neither pipeline system has much excess capacity and significant backlogs exist on manufacturer orders for pipe, in part due to limited steel supply.

Compared to coal, the expected increase in total domestic oil and gas production is small. However, the pattern of oil and gas production will shift from wells in existing fields, which are becoming depleted, to wholly new fields in Alaska and the Outer Continental Shelf, plus oil shale in the Rocky Mountains. Importation of additional gas from Canadian polar sources is possible.

Two factors are significant regarding transport of oil and gas from these new sources:

- They are mostly outside the land area of the continental U.S. and may involve considerable transport by water;
- Existing refineries are not optimally located for the new sources and additional internal transport may be needed.

Production for Alaskan oil and gas sources will reverse the direction of flow to southward by tanker along the West Coast, as oil from the southern end of the Alaskan pipeline at Valdez moves to Seattle, San Francisco and the Los Angeles areas. If the new production is greater than the Western demand can absorb, additional transport to other parts of the country may be required. There have been a number of proposed pipelines across Canada which could bring oil and gas into the upper midwest or even the northeast, as well as the west.

The requirements of oil and gas movement will be the construction of extensive new pipeline systems in difficult terrain and conditions and/or expansion of the tanker fleet. The supertankers—or very large crude carriers—offer improved efficiency both in

KEEPING IT TOGETHER—*Unit trains are considered the most economical method of long-distance hauling of coal from the western states. Standardized sizing of coal, which currently comes in 150 different types, will also facilitate formation of such trains.*

construction and operation in the Federal Energy Administration's view. Typically a 265,000 dead-weight ton tanker could serve the Valdez-San Francisco route at about 68 percent the cost and 84 percent the quantity of steel per barrel moved, compared with a 90,000 D.W.T. ship, according to FEA.

The necessity of having deepwater ports to handle the supertankers will have a substantial impact on Alaska as well as other coastal areas. The tankers are used to ship crude oil in large quantities from supply points to offshore pumping stations (usually 25-30 miles from shore).The oil is then pumped directly to on-shore storage tanks and from there to the refineries.

The use of supertankers has raised some environmental and safety questions. There are, at present, no strong safety requirements (such as double bottom construction standards and size restrictions) which would reduce the potential for oil spills. While the danger of spills is lessened by reducing the number of oil-carrying vessels at sea, the sheer size of supertankers creates the possibility that each spill could cause major environmental damage.

In addition, supertankers require long stopping distances and are difficult to maneuver. However, these are problems which can be solved through the establishment of appropriate design standards.

Deepwater ports raise territorial questions, since most of them would be established outside U.S. territorial waters. This issue was raised at the recent UN conference on the Law of the Sea without being resolved. In addition, a problem exists due to the lack of authorization to build deepwater ports; Congressional action is currently under way in this area.

NEW TO THE NEIGHBORHOOD—*Pipelines, and other oil facilities, are going where they've never been before as the drive for energy self-sufficiency begins to assume concrete form.*

Coal and petroleum—waterway. The nation's waterway system consists of miles of inland waterways plus the great lakes and intracoastal waterways. All safety and navigational aids as well as locks, dams, and channel maintenance, are entirely government-supported. Use of all waterways is free to waterway operators; some commodities are regulated but many are not. The waterways industry has been growing steadily over the past 30 years, and it now carries about 18 percent of coal and 42 percent of petroleum ton miles. Barge and towboat utilization are generally good; no large surplus of equipment for coal movement exists. In fact, there are significant order backlogs for manufacturing barges and towboats.

It appears that most, if not all, high priority opportunities (in a benefit-cost sense) for developing the waterway system have already been exploited. The capacity of the present system, except for a few bottlenecks, is many times its present level of usage. The federal cost of operating the waterway system in fiscal 1972 averaged about $526 million.

Traffic on the St. Lawrence Seaway, although at a record high, has been leveling off in recent years. Future traffic trends are unclear as trade patterns and cargo carrying technologies continue to change, although some growth in overall volume seems most likely. In physical terms, however, the Seaway currently has a great deal of excess capacity.

The major problem concerning inland waterways is the need to improve critical locks. A different problem, however, may limit coal carrying capacity out of the Northern Great Plains in the short run. In the past, the commodity accounting for the tonnage of the Upper Mississippi River has been grain and grain products. At harvest time, the competition for barges and tows is already fierce. The rate of spot service, that is, the rate for shipping one's harvest from a particular location at a particular time, runs from 50 to 100 percent in excess of the normal rate as a result of the great demand for barges. The coal industry, then, would be in direct head-to-head competition with the grain industry for a limited number of barges at certain times of the year.

The principal option to easing inland waterway constraints is that of expediting the improvements of critical locks and dams. An extensive set of improvements is already authorized and planned, but work has not begun. One of the causes for delay is the need to avoid or minimize environmental damage.

Rivers are natural resources for more than transportation, and any action is likely to require reconciliation of divergent interests and concerns. As in many areas of energy/environment trade-off, the need is to expedite the decision process while giving balanced consideration to both national and local interests.

As Operating Costs Mount, Power Firm Stresses Increased Productivity

As the U.S. industrial community makes its transition from a period of cheap, abundant energy to a new era of expense and shortages in energy supplies, many firms are taking a closer look at operating efficiency.

A number of businesses and industries are attempting to measure the productivity of workers and find new ways to increase or improve productivity. Some are using the National Commission on Productivity's general public awareness campaigns, some offer incentives to workers, others hold productivity seminars, and still others are applying new technology.

The Detroit Edison Co., which furnishes power to a heavily industrialized area of Michigan, has made improved productivity its number one corporate goal. Detroit Edison's productivity story is an example of the industrial efforts in progress throughout the nation, and its department-by-department progress may offer new ideas to other firms seeking to establish productivity measurements and programs.

Detroit Edison has 50 percent of its 10,900 employees under some system of productivity measurement and 75 percent will be covered by 1975. In many cases the power company utilizes its computer technology. In others, it's a psychological game with charts posted throughout plant areas to keep productivity "top of mind."

How do workers respond?

"Very well," a company official indicated. "Responsible employees want to know how they are doing."

The manager of one section said that many employees call back after work to get their performance rating for the day.

Detroit Edison, active in the productivity area for years, stepped up its program in response to an order by the Michigan Public Service Commission which placed considerable emphasis on the need for continued and new efforts to assure effective management.

"The Commission shall permit this rate to remain in effect so long as there is a clear indication that the applicant's efforts to maximize its operating efficiency continue to be pursued," said the commission in an order granting a recent rate increase. "The Commission expects its staff and applicant to establish mutually acceptable performance goals, particularly in areas of construction planning and management, full utilization of plant capacity and other critical items of general operations."

Detroit Edison utilizes a management-by-objectives program and, to date, has produced a system of productivity measurements in five key departments.

This is the second in a five-part series of articles authored by White House Fellow Betty Shelton, as part of Commerce's continuing emphasis on improving productivity in U.S. industry. Miss Shelton, who was assigned to the Department of Commerce, visited five firms in different industries and of varying sizes which have been particularly successful in implementing programs to boost productivity. She talked with management and workers alike, to obtain as complete a picture as possible of what the changes had meant at all levels.

BRIEFING SESSIONS—*Regular meetings keep top personnel abreast of latest developments in Detroit Edison's productivity improvement effort. A computer system provides a daily record which allows employees to check their relative performance for the day.*

Precise measurement

The customer service and marketing department places great emphasis on measuring the productivity of its telephone service workers. A sophisticated computer system enables supervisors to monitor customer service calls, track the number of customer service phones in use at one time, and shows waiting time for callers before being serviced.

A computer console at each employee's desk enables them to retrieve all the data on a customer's account from the computer terminal. This facilitates handling of the customer's needs.

The monitoring system also evaluates individual profitability. The individual monitor writes up an evaluation report covering

the general handling of each call monitored, whether it was courteous, avoided use of slang, addressed the customer by name, whether the employee understood the customer's problem and gave the correct information. The results are then used as a feedback to either correct or congratulate the employees on their performance.

Another productivity measurement in this area is to determine whether customers have been satisfied. Each day a number of customers are called back to get their reaction to the telephone service received. They are also asked to suggest areas for improving the service and these suggestions are shown to the employees.

The computer system also provides information for a daily record of the total number of hours an employee spent on the job, how many minutes the employee spent waiting for calls, the number of actual hours spent talking, number of minutes used calling customers, and numbers of calls handled. Each category is given a weighted value and a position ranking.This enables employees on any given day to see how they did in relation to the rest of the department.

Detroit Edison's appliance division is being monitored so that the daily profitability of each repairman is now shown. Previously, the firm repaired appliances free of charge, but now a fee is charged to cover actual expenses.

CONSOLE AT EACH DESK—*A computer console at each employee's desk in the customer service and marketing department enables them to retrieve all data in an individual account from the computer terminal at a moment's notice.*

Shows his worth

A weekly report shows each repairman exactly what he has to make in dollars each day to maintain his own individual profitability. This system has resulted in a great number of repair jobs being completed on the first call.

In setting up productivity measurements for employees of its department of real estate and rights of way, Detroit Edison faced the task of measuring something that had never been measured. The original rating scale was modified in September 1973 and management is committed to giving the employees a continuing role in developing the system.

What first emerged from this pioneer venture was a measurement in which specific tasks had a weighted value based on the technique of: "If X is one task, how many times X will it take to do Y," which requires much more work. In this instance, it was decided that obtaining street light permits was the easiest job, while the most difficult was sub-transmission. Thus, they were given the weights of one and sixteen, respectively. The system also applies to the sales and leasing of different types of real estate. It is set up to:

- Recognize outstanding performance.
- Determine backlogs in each district so work can be equalized by shifting jobs or people between districts.
- Identify time spent on capitalized and experienced jobs to allow proper allocation of costs.
- Allow management to analyze and judge each individual on a factual basis, eliminating career or pay decisions made on so-called "gut-feelings."

Over the course of a year the exact number of transactions completed by an individual, his or her total number of points per year and average per working day, mileage covered, overtime and sick days are recorded.

The cash management department faced the question of how to set standards and measure large or small paperwork processing systems "to provide management with the data by which it can evaluate performance and predict with some degree of accuracy its manpower requirements by tending the workload." A system was established for Detroit Edison by the Price Waterhouse management services organization in the area.

Monthly printouts

It is the traditional "time-and-motion" approach. Standards for such tasks as removing enclosures from envelopes, balancing money orders, typing, and checking bank deposits were set up by observing 50 top workers perform key assignments, and coming up with an average time. At the end of each month, a computer printout shows how each employee is doing.

The gathering of this data has helped not only to evaluate each employee's work, but has also been helpful in training of new employees. As data has been collected over an extended time, a pattern emerges of the learning curve or at what point the new employee should be proficient in particular tasks.

A measurement system in stores and transportation has been institutionalized for 20 years at Detroit Edison. The "time-motion" approach is used, based on standard units of work produced per minute. The system has been computerized and 1,500 basic standards of work operations are used. Although the system is a "time-motion" one, the department's head reports that employees are not expected to produce "in an exact time by minute."

"It's okay if it's in the ball park," the department's head states.

Obviously, data processing is a key operation in collecting the measurement data. Measurement of the data processing department also takes place. It focuses on the timelines and quality of work. Standards have been established to measure turnaround time on assignment, quality, number of reruns and number of errors. It is also a goal of this operation unit to have all jobs completed by eight o'clock the following morning.

After a twenty-year commitment to improved productivity, Detroit Edison is still learning . . . but a "clear desk by eight a.m." policy shows how far it has come.

Indian Reservations Lure Industry With Facilities, Eager Workers

If you're a businessman looking for a place to open a new plant, how would you like a location that provides:

- Plenty of workers eager for jobs and training.
- Job-training programs tailored to your individual industry.
- Attractive building and equipment financing.
- Favorable lease terms, often coupled with state tax benefits for plant and inventory.

Sound too good to be true? Well, more than 40 industrial parks located on Indian reservations meet most of these criteria and are looking for tenants.

In Arizona, the Gila River Indian Reservation, located astride Interstate 10 between Phoenix and Tucson, has three industrial parks, each with a growing roster of tenants and a distinct industrial focus.

The Pima-Chandler Industrial Park, with 156 acres developed out of 289, already has eight industries employing more than 400 people. These firms manufacture a wide range of items, including mobile homes, prefabricated commercial and industrial buildings, valves, tool boxes, kitchen cookware, canned vegetables and data processing equipment.

The Pima-Coolidge Industrial Park has plants manufacturing flares and canvas goods and reconditioning metal barrels and containers.

INDIAN WORKER—*Rosebud Electronics, one of several electronics assembly plants that have located on Indian reservations, is co-owned by the Rosebud Sioux tribe.*

The reservation's San Tan Agripark, located at Sacaton, specializes in firms handling bulk agricultural commodities, such as livestock and grain, produced on the reservation. The tribe hopes to attract a meat-processing firm.

The first two parks are served by Southern Pacific rail line spurs, and all three are within a 45-minute drive of downtown Phoenix.

Salt River Pima-Maricopa Industrial Park is being developed about 12 miles west of Phoenix. Favorable lease and tax terms are based on appraisal of land. Federal and state vocational training programs can be set up to suit the tenant.

San Xavier Industrial Park adjoins Interstate 19 just south of Tucson. It is being developed by Papago-Tucson Industrial Development Corp., which has created 21 sites. Lease and tax terms are favorable. The tenant may build his own plant or lease a building constructed to his specifications.

Navajos have four parks

The Navajo Indian Reservation occupies 23,000 square miles across Northern Arizona and New Mexico and Southern Utah. It has a labor pool of some 40,000, more than half of whom need jobs. They range from the untrained up through skilled technicians and professionals.

The reservation has four industrial parks, each with a major employer as tenant.

Fort Defiance, Ariz., is the site of a General Dynamics plant whose 250 employees make electronic components. There is also a tribal prefabricated housing factory.

Principal tenant at Shiprock Industrial Park, near Farmington, N.M., is Fairchild Semi-Conductor Corp. Tribal funds and federal money built the plant and helped train the nearly 1,000 workers employed there.

Manufacturers of horse trailers and desiccants have located at Churchrock (N.M.) Industrial Park.

The Navajo Industrial Park at Gallup, N.M., can draw on manpower from the city of Gallup as well as the reservation, and has the educational resources of New Mexico State University.

Four large Apache reservations in Arizona and New Mexico are developing industrial parks and tourist attractions, and training their people to work in them.

Fort Apache Indian Reservation has developed the Fort Apache Timber Co. into a complex of sawmill, finished-lumber mill and small log mill, in an effort to attract industry and year-round jobs. The reservation, located 160 miles east of Phoenix, also has a popular ski area which is being expanded for year-round vacations and conventions. Tribal lands can be leased for vacation homes—about 200 have been built already.

San Carlos Indian Reservation, located about 100 miles from Phoenix and less than 10 miles from Globe, Ariz., abuts the Fort Apache lands. The 50-acre San Carlos-Globe Industrial Park is ready for occupancy and the tribe will train workers—some 40 percent of the tribal workforce of 1,000 need year-round jobs.

The Mescalero Apache Indian Reservation industrial park has already attracted a metal fabrication plant. Low-cost leases are offered for 25 years to firms which can assure jobs. The industrial park comprises several hundred acres between Alamagordo and Roswell, N.M.

About 80 miles from Farmington, N.M., which is served by major airlines and the Santa Fe Railroad, the Jicarilla Apache Indian Reservation has developed a 14-acre industrial park. Jicarilla Apaches are already employed on electronic assembly subcontracts for the U.S. Army. The tribe will negotiate lease terms of a building erected to suit the tenant.

Blackfeet and Crow

Skilled lumber workers and cabinet makers are awaiting employment at the Blackfeet Indian Reservation, adjoining Glacier National Park in Montana. The reservation, with a vast reserve of timber and grazing land, has set up the Blackfeet Indian Writing Co. to manufacture pencils, ballpoint pens and markers. U.S. Plywood has taken over operation of a stud mill on the reservation.

Tribal leaders estimate that about half of the 600 unemployed Blackfeet have skills, many in cabinet making and wood finishing. They hope to attract industries providing year-round employment, to offset the present mainly seasonal work pattern. The tribe will build to suit a tenant, and train workers as needed. The park has a Burlington Northern rail siding.

The Crow Reservation in south-central Montana concentrates on coal and the Custer battlefield. Coal reserves estimated at 43.5 billion tons underlie the 1.5-million-acre reservation. Other minerals located there include bentonite, a clay used in drilling muds and fertilizers, and sand and gravel.

The Custer Battlefield National Monument is a convenient side-trip for many of the millions who visit Yellowstone National Park each summer, and the tribe has built tourist facilities there.

OFFICE PRODUCTS—*A tribal firm at the Rosebud Sioux Reservation in South Dakota makes wooden office accessories like these decorated boxes and other items.*

The Fort Peck Indian Reservation in northeastern Montana has developed a 47-acre industrial park. Main industries already located there are Multiplex-West, which assembles and repairs teletype equipment, and the tribal Fort Peck Industries, which contracts for small-parts and electronic assembly.

Despite successful industries located at Turtle Mountain, N.D., there is still need for many more tenants. The Bulova Watch Co. chose nearby Rolla to set its plant to manufacture jewel bearings for U.S. defense equipment, since company executives concluded that the Chippewa Indians could transfer their skills at doing delicate, intricate beadwork to working on the minuscule bearings. The bearings are so fine that a day's output just about fills a tablespoon, so valuable that the few cupfuls produced in a year are worth $1.75 million.

Based on Bulova's successful experience, Mohawk Data Systems decided to locate its MDS-Atron plant at the 20-acre industrial park at Turtle Mountain Reservation. Recently, the tribe used its revenue-sharing funds to help Atron expand, thus increasing employment.

The Devil's Lake Sioux Manufacturing Corp., located at the industrial park at Fort Toten Indian Reservation, N.D., makes military camouflage nets. The reservation is located some 90 miles from Grand Forks. The tribe, which used federal funds to train its members as seamstresses, machine operators and materials handlers, is hoping to attract other industries, since unemployment runs at least 50 percent.

Nearly 200 Ogala Sioux work for Pine Ridge Products, located on the Pine Ridge Sioux Indian Reservation in South Dakota. The company, a subsidiary of Sunbell of Albuquerque, manufactures moccasins and dolls in the designs of many tribes.

Also at Pine Ridge is the new tenant Wounded Knee Electronics, which is 100 percent Indian owned. The plant is expected to employ 50 people when fully staffed. Management is provided by OPT Industries of Phillipsburg, N.J.

The Rosebud Sioux Indian Reservation, also in South Dakota, has two industrial parks: St. Francis, 16 acres, and Antelope, 25 acres. At the latter, tribally-controlled firms manufacture wooden office accessories, modular housing and lumber products, and assemble electronics equipment.

Other South Dakota industrial parks seeking tenants are:

- Crow Creek Sioux Reservation, just south of Pierre—17-acre industrial park at Fort Thompson.
- Sisseton-Wahpeton Indian Reservation—20-acre park midway between Fargo and Sioux Falls, with a nearby airport.
- Yankton Sioux Indian Reservation—17-acre park at Wagner. A pork-processing plant is already located there.
- Lower Brule Sioux Indian Reservation—24-acre industrial tract a few miles south of Pierre.

Also, the Standing Rock Sioux Indian Reservation is developing a $1.5 million tourism complex, Chief Gall Inn, near Mobridge, S.D. With an airport being built with federal aid, the tribe can offer large adjacent acreage for custom development. They also manage their tribal job-training at Fort Yates in a new federally-funded center.

Confederated tribes of Oregon

Success stories abound at the Confederated Tribes of Oregon's Warm Springs Reservation. In fact, the Warm Springs Forest Products Industries, a tribal enterprise, contributes to the local economy by employing about 50 percent non-Indians! The tribes now plan to build a power-generation plant using shavings and sawdust from the mills to produce electricity for the reservation, with some to spare. The Kah-Nee-Ta Resort, a new luxury convention center, is already slated for expansion. Newest enterprise on the reservation is Warm Springs Industries, an electronics assembly plant.

These are just a few examples of the benefits to both employer and worker when industry and Indian tribes form partnerships.

Other industrial parks are located in Florida, Minnesota, Mississippi, Nebraska, Nevada, New York, Oklahoma, Washington and Wisconsin. For the latest information on industrial parks under development on Indian reservations, contact the Indian Industrial Development Office, Economic Development Administration, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-5321.

Great Issues Face World's Nations On Ocean Uses; Next Talks In March

What may be a final attempt among most of the nations of the world to agree upon a comprehensive Law of the Sea Treaty setting up new international rules for use of the oceans is scheduled to begin in Geneva next March 17.

Delegates to the Geneva session will tackle once more the prodigious problems involving the use of the seas, and the protection and management of their resources. They include the rights and responsibilities of states with regard to fisheries, deep seabed mining, navigation, transit through and over international straits, pollution, research and other questions. Many of these issues, it is generally acknowledged, have grown greatly in recent decades, and will grow increasingly hereafter.

The Third United Nations Conference on the Law of the Sea, in the session held in Caracas, Venezuela, this past summer, recommended to the United Nations General Assembly that a session of up to eight weeks be held in Geneva, beginning March 17. The UN General Assembly is expected to approve the recommendation shortly.

The conference also agreed that its final session should be held in Caracas for the purpose of signing the documents which hopefully will emerge from Geneva.

The Caracas conference produced a vast volume of discussion by delegates from the 138 participating nations. After hundreds of meetings, three main committees of the conference developed preliminary texts of more than 250 draft articles or provisions, many in competing alternative versions.

The first committee is concerned with the difficult problem of the deep sea-bed. The second committee deals with a wide range of issues extending from the controversial territorial sea question and a proposed economic zone to the rights of landlocked countries and the problems of archipelagoes. The third committee handles questions relating to the preservation of the marine environment and scientific research.

During the interim between now and the Geneva session, groups from these committees are at work trying to refine the differences on the many issues involved in the hope that when the delegates once again meet they can proceed more readily toward an agreement. The treaty they are seeking to draft is easily the most ambitious of its kind in human history, but the urgency likewise has never been equalled before.

The hopes, the outlook, and the dangers were explored in a briefing held in Washington late last month. The briefing was sponsored jointly by the Law Committee of the Marine Technology Society and the Law of the Sea Institute of the University of Rhode Island. A dozen government, industry, and academic leaders in the field reviewed the Caracas conference in depth, the outlook for the future, and the alternatives to an international agreement. Both optimism and pessimism were expressed, and sharp warnings were voiced as to the consequences of unilateral action, whether on the part of the United States, other countries, or both.

Year of decision

"I do think," said Ambassador John Stevenson, Special Representative of the President for the Law of the Sea Conference, "that 1975 is really the year of decision as to whether we shall have a Law of the Sea treaty or not. It is not merely the question of whether it will take one, two, or three years. I think it really gets to the heart of the question as to whether this exercise will succeed."

Stevenson warned that 1975 probably will be the best opportunity ever presented to reach a comprehensive treaty on the seas, and that if a substantial agreement is not reached the opportunity may slip away and the positions of the various countries may become hardened and polarized.

He emphasized that the proposed treaty represents the only satisfactory way of bringing the nations into concerted action on ocean use, and of avoiding "the chaos and conflict" that otherwise would result.

He voiced the belief that the reason more was not achieved at the Caracas conference was that "there was a lack of political will on the part of many and perhaps most countries to make hard negotiation choices.

"I think," he said, "that this was partly the result of the fact that everyone knew there was going to be another session in 1975 and felt that this was too early to make those decisions. I think that the absence of any organized treaty text in some of the critical areas like the economic zone contributed to the failure of governments to face up to some of these issues. I think also that the concept of a package deal prevented making decisions in some areas."

Stevenson said that, while the results at Caracas were not all that had been hoped for, they were "by no means a failure." He commented that a large number of countries supported the idea that a comprehensive treaty was the best way of achieving a solution of ocean problems. The general debate, he said, turned out to be very constructive, with only a few countries indulging in polemics, and overall the progress achieved was greater than the tangible evidence would indicate.

He pointed out that at Caracas for the first time the U.S., the United Kingdom, and the Soviet Union expressly accepted the idea of a 200-mile limit for the economic zone conditioned upon a satisfactory overall treaty package and including provisions for unimpeded transit of international straits and balanced rights and duties of coastal states within the economic zone.

A sharp warning against unilateral action by the U.S. in seeking to deal with ocean problems, particularly with respect to fisheries, was issued by Professor John Norton Moore, of the Department of State, Chairman of the Interagency Task Force on the Law of the Sea. He emphasized that a comprehensive treaty is within reach, and that the negotiations are moving toward it.

Referring to legislation pending in Congress to extend contiguous U.S. jurisdiction in fisheries from 12 miles to 200 miles, he said:

"Are we to continue to seek cooperative solutions even when the going is rough and the pace slower than we would like, or are we to yield to the short-run temptation of unilateralism which inevitably would lead to conflict for the world's oceans?"

The alternative facing the Law of the Sea Conference, he said, is for each nation "to go it alone." He warned that there is a variety of clear costs in that kind of action, and that there is "a real potential for conflict . . . which with time and intensification of ocean uses is going to become much greater."

Moore commented on increased enforcement measures which the U.S. Coast Guard will be puting into effect December 5 as interim steps to protect U.S. stock which is seriously endangered.

"They include a number of bilateral and limited multilateral negotiations that are being pursued with the nations fishing off our coasts, and very importantly they include an effort to insure that the fisheries and deep sea-bed mining portions of the treaty will be applied on signature of the treaty without waiting for the full legal period of ratifications necessary to bring the overall treaty into effect."

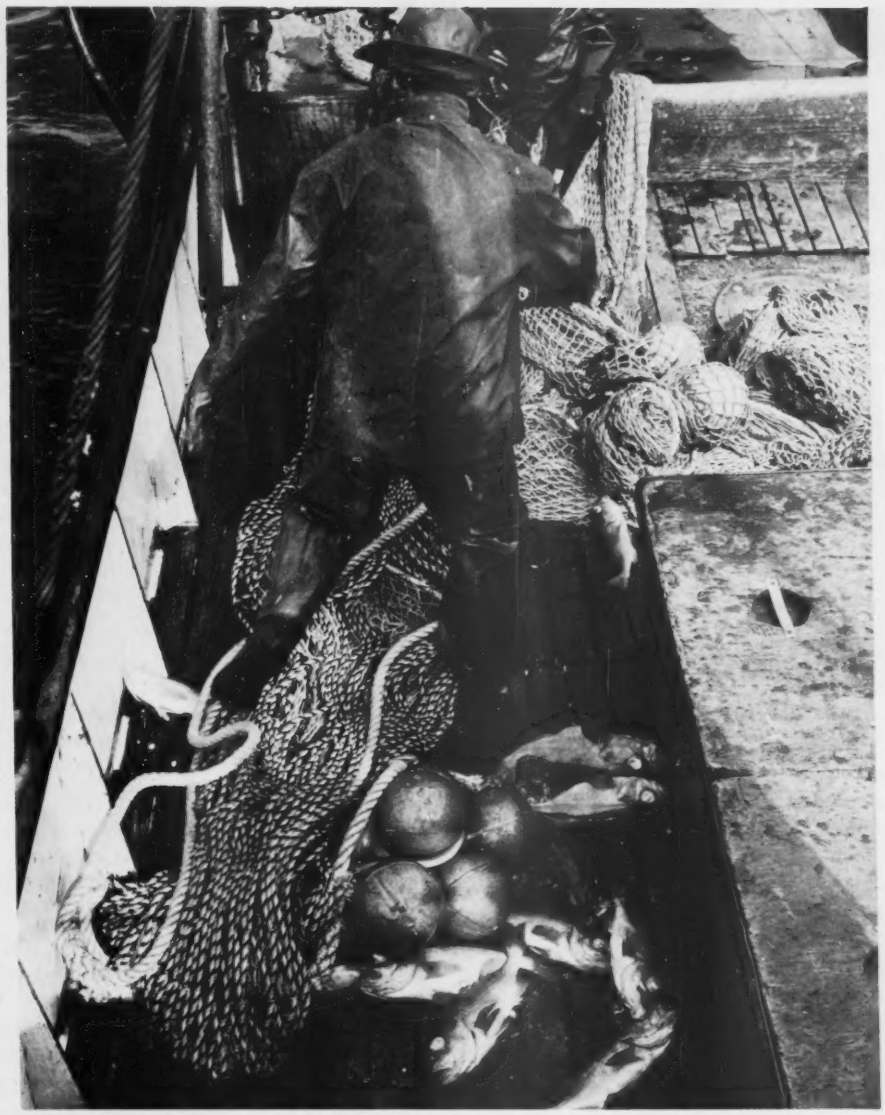
Moore said that unilateral action such as is proposed would be a clear violation of international law.

Howard W. Pollock, Deputy Administrator of Commerce's National Oceanic and Atmospheric Administration (NOAA), in discussing the 200-mile economic zone system which the U.S. under specific conditions had expressed a willingness to accept, said that three main approaches emerged at Caracas with respect to this issue.

One, he explained, was the insistence of a number of coastal countries that they should have a 200-mile territorial sea with no one in the international community saying what they could or could not do within that zone subject to any rights the state might give away. The second was the position of the U.S., which coupled state regulation with the duties and concepts of conservation and full utilization, and the third was the proposal of the European Economic Community (EEC) states which emphasized more the rules of regional organizations and contained a great deal more flexibility. The real decision, he suggested, has to be resolved between the first two of these approaches.

Pollock said the maritime nations, and particularly the U.S., United Kingdom, and USSR, made significant moves toward increased coastal state rights regarding fisheries at Caracas. He added, however, that the U.S. was concerned about the duties accompanying the rights, including the obligation to conserve fisheries and to permit foreign fishing under coastal state regulation where fishery resources were not fully utilized.

Questions relating to fishing involved in the proposed economic zone, he said, included the following: What are the duties of coastal states with respect to conservation and full utilization of fish stocks? What are the rights of access of land-locked states to fisheries? What is the role of regional and international organizations in fisheries management? What special provisions should be included for highly migratory and anadromous species? What are the rights and duties of coastal states with respect to enforcement?



TREATY NEEDED—*The use of the oceans, and the protection and management of their resources, were of paramount concern at the recent Law of the Sea Conference.*

James L. Johnston, Deputy Director of the Office of Raw Materials and Ocean Policy of the Treasury Department, said that, with respect to deep sea-bed mining, the basic difference revealed at Caracas was between the land-based producers and the potential producers from the deep sea-bed. Since the primary negotiations are between these two groups, he concluded, "the chances of reaching a viable agreement are slim." He pointed to moves which he said would amount to setting up a cartel for deep sea-bed mining, with controls over production and prices.

Jacob J. Dykstra, representing the Point Judith Fishermen's Cooperation Association, said his organization was supporting legislation pending in Congress to extend contiguous U.S. jurisdiction in fisheries from 12 miles to 200 miles. He said he believed such legislation "is right at this time."

"It amazes me," he said, "that anyone could think we could negotiate a treaty, being as far apart as we are. The negotiators are looking through rose-colored glasses, and that, of course, is their job."

Cecil J. Olmstead, representing the Texas Oil Corporation, said that if prospects for a satisfactory agreement were as dim as he saw them the U.S. should consider drawing up a model law of the sea, containing all of the elements which it would like to see in a treaty, and enacting it as a statute.

"It should not be done in a jingoistic or nationalistic manner," he said. "The U.S. could invite other nations to consider similar action."

Energy Management Digest

NEW ENERGY UNIT...Commerce's National Bureau of Standards has established a new Office of Energy Conservation to advance the use of energy-efficient technology in buildings, communities and industry. OEC will develop and oversee NBS's energy conservation programs and research, and cooperate with other federal agencies having energy conservation interests. Projects are already under way in each of the three areas in which the new unit has responsibilities --buildings, communities and industry. In the buildings program OEC is carrying out research on retrofitting existing housing, designing guidelines for new, energy-efficient buildings, studying heating, ventilation and air conditioning systems in commercial buildings, and improving measurement technology for each of these areas. The major project in the communities program is evaluating a total energy plant in Jersey City mentioned in the last issue of Commerce Today.

SHARING KNOWHOW...Industry projects of the newly-formed Office of Energy Conservation at the National Bureau of Standards include the development and implementation of "The Energy Conservation Program Guide for Industry and Commerce (EPIC)," mentioned elsewhere in the Domestic Business Section of this issue, a new handbook which has been developed to help organizations establish energy conservation programs or improve existing programs. Other projects include developing a guidebook to help engineers improve waste heat recovery in industrial furnaces, development of improved methods for measuring performance of industrial furnaces, and development and demonstration of waste heat management systems.

PROPANE PRICE RISES CURBED...The Federal Energy Administration has amended its propane price regulations to limit potential increases in the price of propane. The new propane rule limits the amount of increased costs of crude oil or natural gas liquids that may be applied to propane prices by refiners to the proportion of propane produced from each. Approximately 30 percent is produced from crude oil whose average cost has increased dramatically, while 70 percent is produced from natural gas liquids which have had relatively stable prices. The new rule has been designed to assure that the amount of increased product costs allocated to propane will more closely reflect the actual product cost increases attributable to propane.

ENERGY AID FOR POOR, AGED...The Federal Energy Administration is funding a study of how State Offices of Petroleum Allocation (SOPA) can best respond to the energy problems of the poor, elderly and handicapped. The study will be conducted by the Paul Douglas Consumer Research Center of the Consumer Federation of America under a $48,500 contract from FEA's Office of Consumer Affairs and Special Impact. "We are particularly concerned with finding ways to help low-income consumers pay for home heating and insulation," said FEA Administrator John C. Sawhill. Sawhill said the study would help define: 1) State procedures for resolving individual problems and complaints. 2) Linkages between SOPAs and state human resource agencies to assist needy persons in paying fuel costs. 3) Other forms of financial assistance, such as credit, to enable people to pay fuel or home insulation costs. The study will also identify agencies at the state and local level able to alleviate the impact of high energy costs on the consumer. Results of the study will be incorporated in a manual for distribution to state and local organizations and private citizens.

SPREAD THE WORD...Energy-conscious executives can help spread the message by using the recently-issued energy conservation postage stamp on all their correspondence. Issued in late September, the new stamp features the words "Energy Conservation" superimposed upon bright sunlight. At the lower left appear molecules, a drop of gasoline and a drop of oil, symbolizing containment of different forms of energy. The colors are black, yellow, pink, green, orange, and blue. In addition to the stamp, the Postal Service recently announced that its conservation program will result in use of substantially less energy to handle more mail than ever before.

Views From The Economic Summit: U.S. Business Leaders Prescribe Cures For Inflation

Secretary of Commerce Frederick B. Dent and four representatives of business and industry made the following statements to the President's Conference on Inflation September 28:

Secretary Dent:

At two business and industry conferences, I heard admiration for our economic system, confidence in it, and broad-based suggestions for improving it for all of our society.

My experience at two pre-summit meetings convinces me that a basic problem is that we have asked too much of government. Government, in turn, has asked too much of our economy. Our commitment and our ability to produce and to save has weakened.

Local, state and Federal Government takes about one-third of our annual production in taxes. More funds are borrowed under terms of government loan guarantees.

We must re-establish a non-inflationary balance between supply and demand.

Our productivity — yes, the performance — of our economy must be improved. All of us — teachers, plant employees, farmers, government workers, executives — must improve our individual performance by being more effective and efficient.

Both the public and private sectors must become leaner. Wasteful, non-productive practices — whether by business, labor or government — need to be eliminated.

In addition, all of us must accept some sacrifice. If we are to correct the economic ills, no sector of the economy should be carried by the others.

Mr. President, I endorse a crusade for America involving balanced budgets, lowered demands on government at all levels and improved economic performance by all Americans.

Arthur M. Wood, *Board Chairman, Sears, Roebuck & Co.*

In Pittsburgh and in Detroit, the conferees from business and industry singled out spending by government in excess of revenues as the underlying basic cause which has over a period of years brought us to our present predicament. The U.S. Government has been living beyond its means, something no American family or business can do for long.

In spending beyond its revenues, the government has caused the money supply, including bank credit, to expand faster than the real output of goods and services. From 1963 to 1973 our total money supply increased 120 percent, whereas goods and services produced in the nation increased only 50 percent. Our government has been trying to accomplish too much too fast. When this happens, instead of government programs helping people they end up hurting people through inflation. To correct this situation, the government must stop spending more than it takes in through taxes. This will not cure inflation overnight, but expense reduction should start now and the Congress and Administration must dedicate themselves to living with a balanced budget for the foreseeable future.

Certainly other factors have added to our problem. The disastrous rise in the price of fuel oil and gasoline, the devaluation of the dollar which greatly increased overseas demand for U.S. goods, and shortages of foodstuffs and other commodities have all contributed to inflation. Today, shortages are being reduced by increasing production, in our mines and oil fields and in our factories. Business and farmers are going all-out to increase production. This will help to stabilize prices as supplies catch up with demand.

In order to enhance production, it is essential that productivity be improved. As wages and salaries have been increased to help catch up with the cost of living, business is experiencing a decline in productivity. This works against stabilizing of prices.

The government should take a hard look at laws and regulations which add to the production process, but do not contribute to one more unit of product. Environmental and plant safety regulations increase production costs and consume capital that would otherwise be used to increase output.

Businessmen agree that pollution must be eliminated. But it is important to note that the cost of anti-pollution and safety devices has been reflected in higher product prices.

The business conferees are strongly opposed to wage and price controls. Price controls caused shortages of materials and many low-priced products disappeared from the market. Profits were squeezed and only high sales volume prevented serious set-backs to business. Wage controls were unfair and contributed in some cases to a deterioration of productivity. Controls do not correct the underlying pressure on prices. They do not deal with the real causes of inflation. We urge the President to stand firm in his opposition to controls. This should counter any temptation to raise prices now in fear of controls coming on later.

Some of our conferees urged measures to stimulate savings and to restrict consumption. Other conferees, including myself, support the emphasis on savings, but are opposed to restrictions on consumer credit. These are adversely affecting the ability of millions of new young families to purchase household equipment and would reduce production and possibly employment in the plants that manufacture these goods. It is important to note that the consumer has restricted her total spending over the past 12 months. There has been little growth in real terms of consumer expenditures for goods.

Finally, there is evidence that the supply situation is improving in many consumer products and some raw material prices are softening. Increased supplies and vigorous competition in the marketplace should help turn the tide of rising prices.

Reginald H. Jones, *Chairman and Chief Executive Officer, General Electric Co.:*

I shall try to deal with four subjects on which there was a substantial measure of agreement in our conferences: monetary policy, capital formation, taxation, and international cartel pricing.

To many, monetary policy is not very well understood and perhaps it is best left to the economists. The rate of growth in our money supply has such an impact on the rate of inflation and on the growth of our economy that it is deserving of some discussion. Under classic definition by

SPEAKERS LINEUP—*Four speakers at Economic Summit compare notes. From left, Jerry T. Jones, Arthur M. Wood, Mary Wells Lawrence and Regionald H. Jones.*

tightening up the supply of money, we increase interest rates thus making borrowing more expensive. This reduces demand for all sorts of products and services and so brings a downward pressure on prices and reduces inflation.

So far this year money supply has grown a little over 5 percent, with almost no growth in the June-August period. While businessmen have generally supported a tight money policy up to this time, they are now expressing serious concern that an overly restrictive policy will tilt the economy into a sharp recession, with unemployment next year exceeding 7 percent. You see, with inflation rates running in excess of 10 percent, a growth in money supply of 5 percent means that we all have 5 percent fewer real purchasing power dollars to work with—whether as consumers to spend for necessities or luxuries, or as businessmen to replace inventories or expanding manufacturing plants. This credit crunch is twice as severe as those of 1966 or 1970, each of which was followed by recession.

It has been suggested that this shortage of real dollars be reduced so that while the rate of monetary growth will constantly trail and be less than the rate of inflation, it will drop gradually and thus cushion the deflationary impacts on the economy. This action would also tend to hold up federal revenues through tax collection from a stronger economy with reduced expenditures since there would be fewer unemployed. It should help to balance the federal budget, and thus leave that much more credit for all of us as consumers or as producers.

The secondary agreement covered the need to encourage sustained business investment in modernization and expansion of our production capacity. Increasing our ability to produce more goods and services, and with greater efficiency, overcomes shortages and thus helps to hold prices down. As a nation we have been re-investing only 15-16 percent of our total output in productive capacity. Last year Japan increased 36 percent; Germany 26 percent. We must also increase our capital to provide jobs for the 1¾ million people who will be entering our work force each year. The needed capital must come from profits and from depreciation expenses allowed on tax returns.

Profits dropped from 5.6 percent of the Gross National Product in 1965 to only 4.3 percent in the last year. By another interesting measurement, profits amounted to 14.5 percent of all the compensation costs for employees back in 1965, but that figure last year was only 11 percent. Businessmen feel that depreciation allowances should be liberalized. Investment tax credits for utilities, and expenditures for safety and environmental protection should be charged off as expenses since they add nothing to productive capacity.

Many of the businessmen also favored some form of tax relief for those with lower income. Hopefully this would moderate demands for catch-up wage increases that would only push up prices again. But all such tax measures will require offsetting federal revenues, which should come in from a stronger economy and possibly from higher minimum taxes or even a temporary surtax on incomes in the higher brackets.

Another major concern at the Pittsburgh Conference was the enormous inflationary burden caused by the cartel of oil-producing nations. During the upcoming trade negotiations which, of course, hinge on the passage of the much needed Trade Bill, perhaps we should seek to develop an international code of behavior with respect to all shortage situations—oil, bauxite, and even wheat. As President Ford has suggested, the United States does have a position of leverage with its enormous capabilities in food and high technology products.

Mrs. Mary Wells Lawrence, *Chairman, Wells, Rich, Greene, Inc, New York:*

In the advertising business, you get an inside view of a wide variety of consumers, businesses, and government, which is, after all, the biggest business of them all.

Since 1960, government has increased spending on programs other than defense 309 percent. In the same period, I have watched government anti-business feeling grow in almost direct proportion to increased government spending.

Some Congressmen and labor leaders have spoken here as though a socialized state and nationalization of business were their goal. This anti-business trend is surprising when you consider that over 80 percent of all taxes are generated by business through corporate profits, Social Security taxes, taxes paid by people employed by business, and other business taxes.

It's also surprising when you consider that people need business to prosper so that they can work in confidence, increase their wages and improve their standard of living.

It's surprising, too, when we can see the problems Italy and England have as warnings.

The United States' first national priority should be to help its businesses succeed in world markets and to nourish them so they can provide high employment and higher incomes.

The regulatory fever in government has created so many restrictions and controls that businessmen today operate defensively rather than aggressively.

With the Consumer Product Safety Commission and line-of-business reporting, government has gone too far in its passion to run business. There is so much uncertainty and even fear of government in business that many businessmen are less willing to innovate or risk very much on the future. Americans will end up paying a high price for this time of withdrawal.

A lot of government controls are created in the name of the consumer. They may be noble in intent but I've watched government controlling business on an everyday, working level and a lot of those regulations deal with trivia; a lot are confusing, a lot are impossible, and the waste of time and energy is enormous.

If you added up the cost of the effects of government regulations in all industries,

it would prove to be one of the major factors in higher prices today. Business cannot possibly absorb the entire cost so the consumer is paying for it, too. In the research we do in my industry, we find that the consumer does not want to pay for so much government in the way of higher prices.

For example, most people resented the presumptuousness of government attempting to force them to use seat belts. They were bitter when they had to pay for those seats belts.

There are thousands of government regulations that are more hidden than seat belts, gobbling up consumer dollars and choking business. We urge the President and Congress to stop—don't add any more agencies and controls for at least two years.

We urge the President to charge the Wage and Price Committee with the responsibility to recommend eliminating legislation and agencies that are obsolete or are a mistake and are adding to costs.

I've also seen in studies that taxpayers feel they are paying too many taxes for too many government programs. Take minority groups. The taxpayers feel no body in government, Republican or Democrat, is listening to them.

You are listening to many experts here today but any program you create depends on the cooperation of the people and I think you should find new ways to listen to them, too. You can listen to them through a poll but the average poll would be too simple. For example, if you were to ask someone if he or she is in favor of a consumer or social program that sounds good, he or she would say "yes." If you gave that same person $100 and then asked him to either pay for the programs he wanted or to keep the $100 for himself the replies would be more illuminating.

I recommend that you employ Yankelovich or Gallup to conduct a national study for the President and Congress. It is possible to create a study that presents alternatives and query the people on just how much government involvement people really want to pay for in prices and taxes.

On my experience, I would take a bet they don't want to pay as much money for government as they are now paying.

Jerry T. Jones, *Chairman, National Association of Black Manufacturers:*

The present economic condition, termed "economic crisis" by all sectors of the community, poses grave concern for small and minority-owned businesses. Some economists say the problem is caused by the economy being near full employment and therefore nearing full productive potential, with some sectors of the economy reaching maximum capacity before others. Many economic solutions to the problem of rampant inflation exist. The problem, then, is to find a politically feasible solution.

In choosing a politically feasible solution considerable attention should be given to the productive potential of small businesses. Small businesses contribute 39 percent to the Gross National Product, representing about 43 percent of the total productive capacity of our country. Sixty-five percent of the non-government sector work force is employed by small businesses. Ninety-nine percent of minority-owned businesses are small.

Small businesses are plagued by shortages of materials and tight money. The present monetary policy has added to the cost of high interest rates, has made financing expensive to small and minority business, and has made money for loans less available. Immediate action should be taken to relieve the financing problems of small businesses caused by tight money conditions.

Consideration should be given also to the creation of a domestic development bank for the purpose of aiding in the redevelopment of rural and urban depressed areas.

A system of tax concessions or credit should be instituted immediately to develop the necessary incentive for increased use of the unproductive or under utilized people of our country.

Loans and investments in small businesses that are not labor intensive but have a potential to offer increased productivity through the utilization of technological or capital intensive advances should be more easily consummated.

Likewise, a one-year moratorium on federal loans to small businesses, with a guarantee of direct aid, should be instituted if the particular situation warranted.

Government programs directed toward the development of small businesses should be maintained. The Small Business Administration Aid program should be doubled. The basic premise upon which these programs have operated is that minorities must achieve parity in the most expeditious manner if we are to prevent our country from being destroyed from within.

All minority groups have recommended full employment. It is debatable that this goal is economically attainable. However, when you consider that minority receipts represent 7/10 of one percent of total business receipts of $1.4 trillion with the minority unemployment rate of 9.7 percent, it is reasonable that business and government immediately strive to increase minority business receipts to 1.4 percent. This act, it is estimated, would lower minority unemployment to 6 percent with commensurate results on inflation by transferring funds from such areas as welfare to areas that would contribute to productive output, thereby threatening our tax base.

Many small companies that are doing business with the Federal Government have fixed-price type supply contracts. Due to the present escalation in material costs, these companies are being squeezed into unprofitability because they are not able to pass on unexpected increases, or to justify a proper rate of escalation on new contracts. We suggest that the government develop sufficient guidelines for rates of inflation acceptable by the government on contracts for supplies to be delivered in the future.

MEETING AT THE SUMMIT—*Mrs. Lawrence greets Treasury Secretary William E. Simon at Washington meeting.*

In order to accomplish this type of growth for small business, a long term desirable goal, it is necessary to structure business development programs in such a way as to increase the effective "clout" of small business in areas where big business dominates and therefore bring about a more competitive and productive economy. It may be said this is a long-term solution. We have already admitted the problem of inflation has only a long-term viable solution.

The future of big business and labor rest upon the shoulders of small business.

At the close of the conference, President Ford appeared before the delegates. He said, "You have done your own work well. Now it is my turn. . . . As your President, the only special interest I have, the only special interest I represent, is the American people—housewives struggling with rising grocery prices, workers whose real purchasing power has eroded because of inflation, businessmen trying to control rising costs, families needing new homes but unable to find mortgage money to buy them, those thousands of unemployed who want to work, the elderly locked into pension programs earned years ago, indeed all 213 million Americans.

"I pledge to you that I will not shrink from the hard decisions needed to meet the problems facing each and every one of us."

Industry Highlights

Antifreeze Shortage Likely To Hit Big Users Hardest

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

A 10 percent shortage of ethylene glycol-based automotive antifreeze is expected for the 1974-75 season, according to chemical analysts in Commerce's Bureau of Domestic Commerce. The shortage is due to limited effective capacity, diversion of ethylene glycol to polyester film and fiber manufacture, and some shortage of consumer-sized packages resulting from new regulations by the Consumer Product Safety Commission calling for child-resistant closures.

Prices of antifreeze have increased substantially, and may go to even higher levels.

Ethylene glycol is the basic ingredient in modern, permanent-type automotive antifreeze now more commonly called antifreeze and summer coolant. Higher operating temperatures of modern motors dictate usage of the higher-boiling glycol solution throughout the year.

Most ethylene glycol is made from ethylene, a petro-chemical intermediate which is in very short supply. Production of ethylene in 1973 was 22,400 million pounds, of which 20 percent or 4,500 million pounds was processed to ethylene oxide, the immediate precursor of ethylene glycol which took some 60 percent of the total ethylene oxide production. New ethylene capacity is being installed as fast as adequate feedstocks can be assured, but will not be in operation until 1975 or later.

Ethylene oxide capacity may require even longer to catch up, although new processes yielding ethylene glycol directly from ethylene are being developed.

Among the many uses of ethylene glycol, automotive antifreeze and production of polyester fibers and film are by far the most important. About 60-65 percent of the glycol goes to antifreeze, 25-30 percent to polyester. The balance is accounted for by a multitude of uses such as solvents, brake fluids, paints and deicing fluids for aircraft.

Demand for glycol, the comonly used designation for ethylene glycol, currently exceeds supply. The market for polyester fibers has been growing at the rate of 12 to 15 percent per year domestically, 25 percent worldwide. Virtually all purified ethylene glycol is being diverted to textiles. One major supplier of antifreeze formulation is dropping out of that market to concentrate on supplying fibers.

Ethylene glycol plant capacity is about 4,425 million pounds per year. In 1973, production was reported as 3,290 million pounds, a decrease of 13 percent from the 1972 level of 3,761 million pounds. Problems with plant maintenance and operation have kept production from a closer approach to rated capacity.

Exports down

Exports of glycol in 1973 amounted to slightly over 174 million pounds, about 75 percent of the 1972 total of 233 million pounds. Exports in the first six months of 1974 amounted to 96 million pounds, about 90 percent of the figure for the equivalent period of 1973. If exports in the second half of 1974 follow the pattern of the previous year, they should reach a total of about 135 million pounds, about 22 percent less than 1973. There is indication, however, that they may be increasing, since July exports were appreciably greater than in July 1973.

There are no really satisfactory substitutes for ethylene glycol in automotive antifreeze. Small amounts of propylene glycol (10-15 percent) can be blended with the ethylene glycol, but propylene glycol is in equally short supply. Methyl and ethyl alcohols, once widely used as antifreeze, boil at much lower temperatures and would evaporate rapidly at the higher water temperatures of modern engines. And they, too, are expensive and in tight supply.

A few years ago, antifreeze was a glut on the market and was wholesaled at prices below production cost. Now it must compete with fibers and other highly profitable uses, with the result that prices have risen sharply, and the availability of glycol for antifreeze purposes has been curtailed. In July 1973, ethylene glycol was quoted at 9 cents a pound. A year later it was 17½ to 22 cents a pound, reflecting an increase in the price of ethylene from 3½ cents a pound to 6 to 8 cents a pound.

As a result, consumer market prices rose from less than $2 a gallon in discount outlets in the 1973-74 season to $5-6 in July.

Another factor in the reduced supply situation to date has been the production of suitable packages for consumer sales at less than optimum rates. Formerly much antifreeze was packed in hermetically sealed metal containers which were punctured when the contents were to be used. More recently plastic containers have been used which have screwcap closures. By regulation of the Consumer Product Safety Commission under the Poison Prevention amendment to the Federal Hazardous Substances Act, these closures must be of the child-resistant type. Certain of these closures are limited in availability, thus affecting packaging of consumer-sized units by some manufacturers.

Return to the sealed metal container is not an answer, since there obviously is no way to reseal it once it is punctured. There are no practical means to alleviate this situation unless the Consumer Product Safety Commission decides to grant relief from its safety-closure requirement.

With only 190-195 million gallons of antifreeze available to meet the estimated U.S. market demand for 200-205 million gallons, a shortage of 5 to 10 percent is anticipated for the 1974-75 season, according to Winfield W. Sunderland of Comerce's Office of Research and Economic Analysis.

Most consumers will probably be able to obtain their requirements, but large users—fleet owners, municipalities and the like—will probably find it difficult if not impossible to purchase bulk quantities as in the past. These users have historically been price buyers, and may find it necessary, therefore, to shop around in the regular commercial markets. Municipal purchasing agents may well find it impossible to obtain bids on their requirements at anywhere near the lower prices to which they have been accustomed.

No relief will be afforded to those with antifreeze solution still in place in cooling systems by the addition of antirust products to replace that which has already been expended in protecting the coolant from oxidation.

While the used anti-freeze solution will continue to provide freezing protection, the rust inhibitors contained in the products become decreasingly effective with time. The addition of antirust products commonly available will not correct this and in fact may tend to disturb the antifreeze rust inhibitors remaining in the solution, Sunderland reports.

Ethylene Glycol Supply

(In Thousands of Pounds)

Period	Production	Exports	Imports	Net Supply*
1972 (12 Months)	3,761,143	232,942	92	3,528,293
1973 (12 Months)	3,289,994	174,002	23,449	3,139,411
Change 1973/72	—13%	—25%	254.9%	—11%
1973 (Jan.-July)	1,913,429	120,255	521	1,793,695
1974 (Jan.-July)	1,834,614	116,222	20,544	1,738,936
Change 1974/73	—4%	—3%	39.4%	—3%

**Production plus imports minus exports.*

A Turnaround For Copper Finds Prices Down, Supply Up

Demonstrating its extremely cyclical nature, the copper market has experienced a sharp and rapid turnaround in recent months. In contrast with the supply dislocations and record prices that occurred in 1973 and the first half of 1974, the world copper market is now marked by softened demand, a worldwide buildup in inventories, and lower prices according to Emil Romagnoli of Commerce's Bureau of Domestic Commerce.

During 1973 several forces occurred simultaneously to cause a world supply/demand imbalance and to bring about record prices. An unprecedented global demand, coinciding with the economic boom in industralized nations, collided with a host of supply disruptions in producing countries around the world. World Bureau of Metal Statistics data show refined copper consumption rising 8 percent last year to 8.5 million metric tons, while refined copper production increased by only 4 percent to 8.4 million metric tons.

In the United States, consumption of refined copper increased 8 percent in 1973 to 2.4 million short tons, but refined copper supply—including production from both domestic and foreign ores, secondary copper, and imports—increased by a mere 1 percent. Domestic production was adversely effected by mechanical breakdowns, as well as by cutbacks and delays resulting from environmental regulations.

Record price in April

Meanwhile, world market prices, as quoted on the London Metal Exchange (LME), rose from 49 cents per pound in January 1973 to a record $1.52 by April 1 of this year. This reflected the severe supply/demand imbalance for spot metal, as well as speculative activity and investor demand during this period for copper and commodities in general as a hedge against inflation and uncertain monetary conditions. Prices quoted by U.S. producers rose from 50.5 cents per pound in early 1973 to 60 cents, where they were frozen during the 60-day June 13 price freeze and under Phase IV controls. Last December, the Cost of Living Council permitted producers to move the price up to 68 cents (cathode basis), and producers moved it up further to 85 cents, following expiration of domestic controls on April 30.

With the disparity between the U.S. producer price and the LME running as high as 80 cents a pound, this two-tier pricing structure often brought about severe supply dislocations and contributed to a rise in U.S. exports.

More recently, although a decline in both prices and demand had been anticipated, the turnaround since June has been more pronounced and rapid than industry analysts had predicted. Demand has suffered from the depressed housing and automotive markets for brass mill products, while the high cost of borrowing and the scarcity of funds are resulting in cancellations or delays in capital spending plans and are also hindering utility expansions which were scheduled to use large quantities of copper wire.

In addition, the early-fall pickup in fabricator business, which traditionally follows the summer slow period, has not occurred this year. Order cancellations have become commonplace in a business which only a few months ago was straining capacity and was backlogged with orders stretching out for several months.

Supply outlook better

On the supply side, production—particularly outside the United States—has improved slightly and is marked by a notable absence of the 1973 disruptions which were inspired by a series of political, labor, and technical factors. Despite fears earlier this year that a domestic strike would have a serious impact on world supplies, a July 15, six-week strike against a significant portion of the U.S. producing industry—costing an estimated 100,000-150,000 short tons of lost copper output—had little if any impact on supplies. The lost production was more than offset by the recent buildup in world copper inventories, while U.S. consumers were able for the most part to rely upon strike-hedge stocks built up during the second quarter.

Significantly, the shift in copper supply/demand and market conditions are reflected in the buildup of world stocks. According to the Copper Institute, total world stocks of refined copper climbed to 424,971 short tons by the end of August, the highest point since the February 1973 world level of 462,806 tons.

Interestingly, the increase during August was entirely based on an 11,899-ton rise in U.S. stocks — to 54,808 tons — which occurred in spite of the domestic copper strike. Significantly contributing to U.S. supplies and inventories have been 162,162 short tons of copper shipped by the General Services Administration during the March-August period. After rising to 581,055 tons in October 1972, total world copper stocks had been drawn down considerably to 298,270 short tons by the end of November 1973, with U.S. inventories dropping to 36,516 tons at that point.

Japanese exports of refined copper have been largely underlying much of the recent buildup in stocks. Locked into supply contracts for copper raw materials and faced with high interest rates, which increase the burden of financing inventories, and with a sharply reduced home demand, Japanese smelters have been exporting to world markets, particulary to London Metal Exchange warehouses. To date, approximately 280,000 tons of refined copper had been approved for export in 1974 by Japan, and official forecasts had anticipated exports of more than 300,000 tons through the Japanese fiscal year ending March 31, 1975.

However, the level of Japanese exports is now expected to drop off, in light of a September 30 announcement by Japan's Ministry of Industry and Trade—to attempt an immediate 50 percent reduction in exports, including a total ban on exports to London Metal Exchange warehouses. The announcement came in the wake of attempts to obtain a reduction in these export shipments by CIPEC (Intergovernmental Council of Copper Exporting Countries), which represents Chile, Peru, Zaire, and Zambia.

Predictably, the increased world copper stocks and the sharp change in supply and demand have resulted in substantially lower prices. Since early May, London Metal Exchange quotations have declined steadily, reaching 62.6 cents on September 20, although prices recovered slightly to a range of 64-68 cents by early October. Unable to sustain their new-found premium over LME levels indefinitely, U.S. producers were pressured by the market into reducing their quotes for cathode by 6 cents, to 79 cents, in mid-September.

EPIC Booklet Gives Proven Tips On Saving Energy

A new Commerce Department energy handbook for use by companies, universities, hospitals and private organizations to establish or improve ongoing energy conservation programs is now available.

First announced by Commerce Secretary Dent at an August 21 news conference the "Energy Conservation Program Guide for Industry and Commerce" (EPIC) is now available for public order. It was prepared by the Commerce Department's National Bureau of Standards (NBS) in cooperation with the Federal Energy Administration.

The 212-page book outlines specific ways to audit energy use and provides a checklist of energy conservation opportunities which have been identified and used successfully by industry to reduce energy consumption.

EPIC, also known as NBS Handbook 115, can be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 at $2.50 per copy (25 percent discount on orders of 100 or more).

MINORITY BUSINESSWOMAN—*At left, Evelyn Leading-Fighter, owner of a Washington, D.C., area company, watches an employee at work in her woodworking shop. At right, she inspects a display rack, typical of the custom-built items her firm produces.*

This Woman's Place Is Running A Woodworking Shop

An ex-migrant worker, a woman and a Sioux Indian may not sound like a leading candidate for financial backing to run her own business. But with the aid of Commerce's Office of Minority Business Enterprise, Evelyn Leading-Fighter is now owner-manager of a thriving woodworking business in District Heights, Md., a suburb of Washington, D.C.

The youngest of a large family, Ms. Leading-Fighter spent much of her childhood as a migrant farm worker across Nebraska, shucking corn at 2 cents a bushel. She later attended a Sioux Mission School in South Dakota and followed her mother's advice to "work hard and get ahead."

She had worked on the administrative side of the construction industry for 10 years when she decided to buy into Coryell, Inc., a custom woodworking firm where she was then employed. She and a partner, Ashton Curtis, purchased the company in 1973.

With the assistance of the Washington (D.C.) Business Development Center, she applied for and received a $20,000 loan from an OMBE-sponsored Minority Enterprise Small Business Investment Company. Although she cleared only $9,800 last year in personal profits, she hopes to gross $300,000 this year. She is bidding on U.S. Government contracts, which she estimates will comprise about 60 percent of her business.

The completely-equipped shop specializes in high-quality store display fixtures and custom cabinets, furniture, bookcases and other items, working in wood, glass, metal and plastic laminates. For example, Coryell craftsmen custom-built display cases for a customer to house his $1 million bird collection. While Ms. Leading-Fighter's main assignment is managing the company, she can operate a drillpress or lathe when necessary.

Calendar For Businessmen

Oct. 16-18—New York—American Merchant Marine Conf., held in conjunction with 48th Propeller Club Convention, Waldorf-Astoria. (Contact Ed Hurwitz, Port Auth. of N.Y. and N.J. (212-466-7777).

Oct. 20-23—Hanover, N.H.—Small Business Assn. of New England, Inc. executive seminar, Dartmouth College. For information, SBANE, 69 Hickory Dr. Waltham, Mass. 02154. (617-890-9070.)

Oct. 20-24—Dallas—Food and Dairy Exposition. For information, Wes Dibbern, 5530 Wisconsin Ave., Washington, D.C. 20015.

Oct. 21-22—Chicago—First National Structural Foam Conference, Chicago Sheraton. Sponsor: New York University. For information, Alex Makowski, New York Management Center, Dept. 14-NR, 360 Lexington Ave., New York, N.Y. 10017. (212-953-7272.)

Oct. 22—Minneapolis — 1972 Economic Censuses user conference. For information, U.S. Dept. of Commerce Minneapolis District Office.

Oct. 23—Milwaukee — 1972 Economic Censuses user conference. For information, U.S. Dept. of Commerce Milwaukee District Office.

Oct. 23—Glenham, N.Y. — Metrication Seminar for executives, Texaco Research Laboratory Auditorium. Sponsors: Commerce New York District Office, other organizations and area educational institutions. For information, 212-264-0621.

Oct. 24—Troy, N.Y.—Metrication Seminar for executives, Rensellaer Polytechnic Institute Communications Center. Sponsors: Commerce's New York District Office, other organizations and educational institutions. For information, 212-264-0621.

Oct. 25—Utica, N.Y.—Metrication Seminar for executives, Utica College of Syracause University. Sponsors: Commerce's New York District Office, others. For information, 212-264-0621.

Oct. 29—Odessa, Tex.—1972 Economic Censuses user conference. For information, Commerce Dallas Regional Office.

Oct. 30—El Paso—1972 Economic Censuses user conference. For information, Commerce Dallas Regional Office.

Oct. 31—Phoenix—1972 Economic Censuses user conference. For information, Commerce Phoenix District Office.

Oct. 31-Nov. 2—Philadelphia—Communication and Control in Social Processes Conference, The Annenberg School of Communications. For information, American Society for Cybernetics, Suite 530, 1130 17th St. N.W., Washington, D.C. 20036. (202-293-2617.)

INTERNATIONAL COMMERCE REPORT

U.S.-Saudi Arabia Unit Meets Businessmen; NAM Prepares Near East Industrial Mission

The Saudi Arabians are taking a firm line for free enterprise as they move into an extensive development program, but they caution U.S. businessmen to be patient with them in negotiations on new and unfamiliar commercial partnerships.

This was a recurring theme for Saudi Arabian officials as they addressed U.S. industrialists in a meeting in Washington Sept. 26. Saudi members of the U.S.-Saudia Arabia Working Group on Industrialization discussed general project areas that the Saudis are encouraging and invited the attendees to visit their country and investigate these opportunities. Secretary of Commerce Frederick B. Dent urged U.S. business to work with government in building a long-term, continuing commercial relationship with Saudi Arabia that would both help preserve the strength of the dollar and aid in satisfying the needs and aspirations of the Saudi people.

The Working Group on Industrialization is one of four groups set up under the newly-established Joint U.S.-Saudi Arabia Commission for Economic Cooperation, which will be holding its first formal meeting in Saudi Arabia in early December. The other working groups are studying manpower and technical education, technology and scientific development, and agriculture. (See earlier report on industrialization group in Aug. 19 issue.)

The meeting was sponsored by the National Association of Manufacturers, which is working to develop a more organized U.S. industrial approach to Saudi Arabia and the other economies of the Near East. It was noted at the Sept. 26 meeting that NAM President E. Douglas Kenna and A. R. Marusi, Chairman and Chief Executive Officer of Borden Inc. and Chairman of NAM's International Economic Affairs Committee, will lead an Industrial Mission to the Near East Nov. 16-27. The NAM mission will be aimed at developing an effective U.S. industry presence within the overall U.S. Government approach to strengthening U.S.-Arab relations. Some 12 to 15 top U.S. corporate leaders will join Kenna and Marusi in the visit to Saudi Arabia, Egypt, Kuwait, Iran and Algeria.

Gerald Parsky, Assistant Secretary of Treasury, reminded the businessmen and working group members that the underlying objective of these government and business activities is development of strong, continuing U.S.-Saudi commercial ties. The government, he said, will work to facilitate private sector involvement in this effort.

From the Saudi side, Dr. Mahsoon Jalal, Chairman of the Economics Department at Riyadh University and Saudi chairman of the industrialization working group, said that his people have high aspirations and hopes and are looking forward to useful and lasting relationships with the Americans. He added a word of caution, however, to U.S. businessmen who may expect too much too soon in the way of business dealings with the Saudis. Noting that his countrymen are new at the kind of negotiations that will be necessary to implement the $18 billion of industrial projects and many billions more in other facilities they hope to realize, he asked businessmen not to be disappointed if their plans are not immediately negotiated and approved.

Ahmed al-Tuwaijri, Director General of Industries and Acting Deputy Minister of Commerce, emphasized the free enterprise policy of the Saudi Arabian Government. The government role in the Saudi industrialization effort, he said, will be to assist the private sector in preparing, establishing and operating projects. "We know," he added, "that the joint venture approach is the most practical way of achieving our objectives."

Far East Economic Leaders See Moves To Regionalism Surmounting Problems

U.S. businessmen looking for signs of progress toward regional integration of the markets of the Far East were heartened by the responses from Asiatic-Pacific economic leaders at the 1974 Conference on Asia in New York this month.

While acknowledging that rising nationalistic tendencies in many of their nations are getting public attention, and are being exacerbated by galloping inflation and energy shortages, speakers repeatedly stated their beliefs that the underlying moves toward regionalism are as strong as ever. Shared difficulties and the accelerating pace of change can only bring the various economies into a tighter mesh, it was agreed.

From the U.S. side, keynoter Arthur G. Boardman, Jr., of the Irving Trust Co., underlined his confidence that the mutual interdependence all around the Pacific must continue to grow, since it rests on a basic affinity in economies. Examining the current criticisms of multinational company operations both in the U.S. and in host countries, he maintained that these are short-term phenomena that will fade as the global firms are seen to fit into this pattern of growing beneficial interdependence.

The speakers from the Far East ranged over the present and future roles of the multinational corporation in their nations. Australia's Commonwealth Treasurer Frank Crean, for example, described how Australia was accepting new ventures on a selective, flexible, pragmatic and case-by-case basis. The Philippines' Alejandro Melchor, Executive Secretary to the Cabinet, took the occasion to present a spirited case for martial law as a measure for business stability in his nation.

Worldwide inflation was the constant point of reference at the meeting, sponsored by the Far East-America Council of Commerce & Industry. Satoshi Sumita, who heads Japan's Export-Import Bank, attributed inflation's main cause to the Keynesian full-employment, high-growth approach that has no definite response to inflationary pressures. But he warned, too, that big business market domination and price-fixing has caused the world economic structure to "lose its elasticity."

Bulgarians Stress Cooperative Links; New Unit Set Up

Prospects for increased trade and commercial ties between U.S. and Bulgarian firms received a boost from the recent visit of Deputy Premier Ivan Popov, the highest ranking Bulgarian to come to the U.S. officially since World War II.

Popov repeatedly emphasized the possibilities for large-scale cooperation with Bulgarian enterprises, both during official discussions in Washington, and in subsequent visits to U.S. firms across the country.

While in Washington as the official guest of Secretary of Commerce Frederick B. Dent, Popov mentioned that special opportunities exist for U.S. firms in Bulgaria in the areas of agriculture and agricultural equipment, petrochemicals and other energy sources, machine building, metallurgy, and electronics. The scale of opportunities in these areas could amount to as much as $2.5 billion for U.S. business over the next few years, he said.

Besides Secretary Dent, Popov met with a number of other leading U.S. officials, including Secretary of the Treasury William E. Simon, Secretary of Agriculture Earl L. Butz, Special Representative for Trade Negotiations William D. Eberle, and Chairman of the Council of Economic Advisers Alan Greenspan.

During the Washington visit Secretary Dent and Deputy Premier Popov attended the signing of an agreement between the U.S. and Bulgarian Chambers of Commerce establishing an Economic Council. The Council provides a channel for direct dialogue between business leaders and key commercial decision-makers.

William May, chairman of the board of American Can Co., will be chairman of the U.S. section of the newly-established council. Other American firms represented at the signing included FMC, Kaiser Industries, Philip Morris, Chase Manhattan Bank, the Grip Blanking Division of Ebway, Celanese and Perry Harvester Corp.

In his remarks at the signing ceremony, U.S. Chamber President Arch Booth noted that the U.S. has much to offer Bulgaria in such areas as technology for mechanized agriculture, while Bulgaria has "some interesting licenses to offer us in the fields of medicine and metallurgy."

Following the Washington visit, Deputy Premier Popov toured the United States to confer with American businessmen, meeting with commercial bank officials and representatives of the electronics, data processing, agricultural equipment, and steel industries. The discussions, aimed at furthering specific transactions, reportedly resulted in the signing of a number of commercial protocols or long-term agreements.

NEW ECONOMIC COUNCIL IS BORN—*The Bulgarian-U.S. Economic Council was established in Washington Sept. 24 by co-signers Penko Penkov (left), President of the Bulgarian Chamber of Commerce and Industry, and Arch Booth, President of the Chamber of Commerce of the U.S. Observing are (from left) Bulgarian Ambassador Lyubomir Popov, Bulgarian Deputy Prime Minister Ivan Popov, Secretary of Commerce Dent and State Department's John Armitage.*

Engineers To Prep On China Culture

Engineers and supervisors of a U.S. construction firm that has contracted with the People's Republic of China to build eight ammonia plants will participate in a special training and orientation program on Chinese life and culture, including the conditions they may meet in remote parts of the country.

Kellogg, a division of Pullman Inc., has contracted with the Departments of Commerce and State for the one-week program under the direction of Dr. Hattie Colton at the Foreign Service Institute, Rosslyn, Va. Up to 20 of the 40 Kellogg employees who are heading for the PRC will attend. It is expected that the firm's construction team will reside in China from three to 15 months, mostly in remote areas. Under the circumstances, the Commerce and State Department agreed to supply the special program to Kellogg.

The Kellogg contract with the China National Technical Import Corporation is valued in excess of $200 million and is the largest U.S.-PRC contract to date. Virtually all of the equipment for the plants will be produced in the U.S. The eight 1,000 metric-ton per day, single-train plants will feed eight area plants to be constructed by the Kellogg Dutch firm, Kellogg Continental.

TRAINING FOR CHINA-BOUND ENGINEERS—*Lewis Bowden, Deputy Assistant Secretary of Commerce for East-West Trade, and Edward M. Hallinan, Vice President of the M. W. Kellogg Co., sign agreement for the special China training program. Standing (from left) are Philip T. Lincoln, Jr., of State Department; Dr. Hattie Colton, Foreign Service Institute; William Clarke, who heads the China desk in Commerce Department's Bureau of East-West Trade.*

Mining Equipment Group, Prospecting In Africa, Finds Growing Markets

Zaire, Zambia, and Botswana, looking more and more favorable to U.S. manufacturers of mining equipment, drew 11 suppliers of such goods and services this year to evaluate the potential for initiating or expanding their exports.

Digging for leads at every stop—Kinshasha and Lubumbashi in Zaire, Lusaka in Zambia, and Gaborone, Botswana—the trade mission came up with some valuable nuggets.

All three of the countries visited are dependent on imports for mining equipment. There is evidence of large-scale expenditure for development in the mining sector and of the availability of ample funds to pay for such development. Copper is the keystone of both the Zairian and Zambian economies. Botswana has other rich mineral resources.

Representing some of America's leading manufacturers, the trade mission participants were offering a variety of equipment—not only for mining operations, but related construction and transportation as well. Thus, the group met with a broad range of Government officials: in Kinshasa, for example, with the Departments of National Economy, Mines, Commerce, and Public Works, and the Director General of the Office des Routes.

Expansion in Zaire

Twelve companies are extracting and processing minerals in Zaire's Shaba and Kivu provinces. The dominant firm is a Zairian Government complex, GECAMINES, which is launching a $480 million five-year expansion plan comprising a wide range of mining and processing investment. The mission visit was enhanced by the excellent cooperation of GECAMINES, in arranging one-to-one contacts between the U.S. specialists and counterparts in the Zairian organization. One of the problems—reported from Lubumbashi—was the long-lead delivery schedules presented by the U.S. companies vis-a-vis "GECAMINES' intention to be on-stream with new production in mid-'77." Allan G. Marr, WABCO Construction & Mining Equipment Co., Peoria, Ill., said as the group left Zaire: "Although immediate sales were not anticipated here, they are sure to follow in sizable amounts."

Zambia seeks new suppliers

In Zambia, where Government policy is aimed at redirecting the country's international commerce away from its traditional sources of supply in southern Africa, the United States—already with a 40 percent share of the market for mining and related equipment—has a good chance of increasing its share this year.

Continuing expansion of the copper industry, in which the Zambian Government has a controlling interest, and the massive program under way primarily to re-route copper exports—requiring large imports of transport equipment—have greatly expanded market opportunities. Significant imports for mining operations include front-end loaders, detonating devices, pneumatic drills, and exploration equipment. Principal imports from the United States have included heavy equipment, instrumentation, and reagents. Major competition comes from the United Kingdom and other western European suppliers. (See further Zambia report on page 28 of this issue.)

Newcomers to Botswana

None of the mission members had previously visited Botswana. Government officials, especially those from the Ministry of Mineral Resources and Water Affairs, as well as representatives of local prospecting, mining, and construction companies, relished the opportunity to learn about the U.S. products represented.

In Botswana, exploitation of diamonds, coal, copper, and nickel has recently been expanded. Copper-nickel mines at Selebi-Pickwe, to be in production by year's end, are expected by 1979 to have an annual output of roughly 17,000 metric tons of copper and 18,000 of nickel. Three of the mission members flew to Selebi-Pikwe to tour the Bamangwato Concessions Ltd. mine.

The U.S. Embassy in Gaborone has listed the following as having particular applicability to Botswana's mining sector: instrumentation and equipment used in prospecting for coal, diamonds, copper, nickel, and related minerals; mining and refining equipment; and mine spares. Safety and pollution control equipment also are considered to have good sales potential.

IN BOTSWANA—*U.S. Amb. David B. Bolen (left) talks with mission member W. J. Cherones.*

Richard V. Wenberg, Eimco Tunnelling and Mining Division, Envirotech Corp., Salt Lake City, commented upon leaving Gaborone: "The contacts we established here will be very useful in competing for the sizable orders which will come from Botswana's mining industry in the next five years."

Mission members, in addition to those already named, and the firms they represented, were: William J. Cherones, Harnischfeger Corp., Milwaukee; D. A. Dahlstrom, Eimco/Envirotech, Salt Lake City; Malcolm D. Earnshaw, Euclid International, Cleveland; Ira S. Huff, F. C. Torkelson Co., Salt Lake City; Maynard W. Johnson, Allis Chalmers Corp., Milwaukee; Michael Kinna, International Harvester Export Co., Chicago; Grant Risch, Ingersoll-Rand, Woodcliff Lake, N.J.; Henk Sonius, Longyear Co., Minneapolis; D. T. K. Taylor, Koehring Corp., Milwaukee; and Robert J. Wright, American Metal Climax, Inc., New York. The Commerce Department's Herbert Socks coordinated the mission.

IN KINSHASA—*Mission members D. A. Dahlstrom (left) and Ira S. Huff (right) discuss mining equipment needs with M. Kapend, Director of Zaire's Department of Mines.*

Trade Fairs, Centers

U.S. Farm Equipment Exhibitors At Plovdiv Fair See Sizable Sales

Tractors, hay stackers, agricultural chemicals, irrigation machinery, and computer equipment for scientific farming were among the products that attracted special interest last month during the U.S. exhibition at Bulgaria's annual Plovdiv International Trade Fair.

The U.S. exhibition's product theme, Modern Agricultural Equipment and Technology, centered on an area of immediate need in the Bulgarian economy. The theme was selected partly in response to "good sales opportunities" suggestions by Bulgarian officials to Secretary of Commerce Frederick B. Dent during his visit to Sofia last April. (See *Commerce Today*, Apr. 29, page 5, and this issue, page 22.)

More effective than pictures

"It became evident," noted a participant in the 8-day show, "that actual equipment display was more effective than pictures." Off-the-floor sales by the U.S. exhibitors amounted to $615,000, and orders in the next 12 months are projected at $5,375,000. These combined amounts almost equal last year's total U.S. exports to Bulgaria. In addition, negotiations reportedly are under way between an exhibitor and Bulgarian officials on a $5 million contract which, if successful, will boost these figures to about $11 million. Attendance at the U.S. exhibition—more than 235,000—included visits by Bulgarian state trading agency officials.

Of the 13 participating firms in this first U.S. commercial fair promotion in Bulgaria, 11 were new to the market. One such participant noted that the money invested is "very little in comparison to sales." Another firm, though disappointed at lack of contact with state farm officials, nevertheless sold goods valued at $166,610 and reports projected sales of $200,000.

Success was not confined to new-to-market companies. An old-to-market exhibitor expects sales of $2 million in the next 12 months as a result of the show after the company had exerted efforts without specific results for the past six years. Another old-to-market exhibitor, with floor sales of $325,000 and $600,000 in projections for the next year, pointed out that "due to contact with the right people, we were able to speed up procedures."

Still another exhibitor, who won a gold medal at the fair, concluded: "With this type of cooperation, world markets become close to home."

INSIDE THE DOME—*Visitors attending Bulgaria's Plovdiv fair stroll past a 40-foot silo made by Clayton & Lambert, Bushner, Ky., and placed inside U.S. pavilion geodesic dome.*

Auto Accessories, Parts Show In Tokyo Points to Growing Japanese Interest

Add the growing interest of the Japanese in automobile accessories to such more general economic developments as inflationary pressures, labor shortages and dollar-yen revaluations and the result is an attractive and highly competitive position for U.S. automotive products in the Japanese market.

This was the conclusion reached at the recent Automotive Parts and Accessories Exhibition at the U.S. Trade Center in Tokyo, as the more than 1,700 Japanese manufacturers, businessmen, and agents who attended expressed keen enthusiasm for many of the products displayed. The show was specifically tailored to acquaint the automotive community with the wide variety of U.S. products and technology available.

Items of major interest

Reflecting the present Japanese market, the visitors demonstrated the greatest interest in the following items displayed: auto air conditioners, battery testers, anti-freeze testers, engine analyzers, shock absorbers, brake linings, vinyl paints, tandem axle suspension for heavy duty trucks, ignition systems, automotive air conditioning compressors, sun roofs, door and window lifts and emission control devices.

As reported in the Sept. 30 issue of *Commerce Today*, the 19 exhibitors at the show projected sales of almost $10 million over the next 12 months—a half million by participating companies that were new to the market.

VIEWING DISPLAYS—*Japanese buyers learned more about U.S. products at recent Automotive Parts & Accessories Exhibition at U.S. Trade Center, Tokyo.*

USSR OFFICIALS AT U.S. PAVILION — *During* POLYMERY-74 *in Moscow, Council of Ministers Chairman Alexei Kosygin (left) is welcomed by William Vitous, Director of the U.S. exhibition. In photo at right, Soviet official L. A. Kostandov (right), V. I. Arkhipov, and N. D. Komarov talk with James Blow (left) and Thomas Niles of U.S. Commercial Office recently established in Moscow. USSR Chamber of Commerce and Industry awarded U.S. Department of Commerce's Bureau of East-West Trade a gold medal for its participation in* POLYMERY-74.

Moscow Display Of U.S. Equipment For Polymer Chemistry Draws Buyers

U.S. producers of chemical processing equipment discovered last month in Moscow what a large market the Soviet Union offers. The 33 companies that participated in the Commerce Department's exhibition at the USSR's POLYMERY-74 sold almost $3 million worth of equipment during the show. In addition, they project sales in the Soviet market as a result of their presence at some $31.6 milion for the coming year.

Visited by officials

Soviet interest in American products and processes was highlighted by visits of many high officials to the U.S. pavilion. Besides key decision makers of various foreign trade organizations, such visitors included Alexei Kosygin, Chairman of the USSR Council of Ministers; L. A. Kostandov, Minister of the Chemical Industry, who talked with representatives of nearly every U.S. firm in POLYMERY-74; the Chairman of GOSPLAN, the Soviet economic planning body; the President of TECHMASHIMPORT, foreign trade organization importing equipment for the chemical, rubber, and synthetic materials industries; and the First Deputy Chairman of the Presidium of the USSR Council of Ministers.

Equipment and processes on display that evoked special interest from Soviet end-users and buyers included catalysts, acetate-copolymers, fibers, chemical intermediates, polyesters, chlorine cells, silicones, elastomers, extrusion coating machines, large pelletizing extruders, process control systems, plastic fillers, organic chemicals, pressure transmitters, and temperature recorders.

U.S. Exhibition Results In Brief

The following summary reports have been received on U.S. overseas commercial exhibitions. Further details and marketing data derived from these exhibitions will be published as available.

Education Communication Systems Exhibition, U.S. Trade Center for Scandinavia, Stockholm, Sept. 9-13. Exhibitors, 27. Floor sales, $28,900; 12-month projection, $4.6 million, of which about $1.5 million is estimated by new-to-market or new-to-export firms. Agents appointed, 13; under negotia-

Advanced Fluid Power Equipment Exhibition. U.S. Trade Center, Tokyo, Sept. 9-14. Exhibitors, 33, representing 41 companies. Floor sales, $138,200; 12-month projection, almost $5 million, of which more than 20 percent was by the 9 new-to-market firms.

U.S. Exhibition of Computer and Business Machines Industries, 16th International Engineering Fair, Brno, Czechoslovakia, Sept. 11-19. Exhibitors, 15. Floor sales, $284,000 in equipment and services; 12-month projection, $2.9 million. All four exhibitors seeking representation agreements currently negotiating with prospects. Visitors, estimated, 40,000; trade visitors, 1,400.

U.S. Firms Invited To Exhibit Hospital Equipment In Cairo

American firms are invited to participate in a major promotional event in Egypt: the Cairo International Exhibition for Hospital Equipment, to be held at the Cairo Fairgrounds next June 7-17.

Types of equipment to be shown include x-ray and electromedical, dental, operating room, anesthesia, laboratory medical, intensive care, general medical, internal communication, kitchen and laundry, and mobile medical-unit equipment, as well as incinerators and furniture.

Write: Director General for the Cairo International Fair, Exhibition Grounds, Guezira, Cairo, Arab Republic of Egypt. Cable address: NEFERTITI.

Int'l Airport Construction Show Set For Brussels, '75

The Third International Airport Construction & Equipment Exhibition will be held in Brussels, Sept. 15-18, 1975. Since it was first held at Schiphol International Airport, Amsterdam, in 1970, the exhibition has been earning an increasingly solid reputation as a satisfactory, cost-effective show for exhibitors.

The next 20 years promise to be a period of unprecedented activity in airport development. Industry leaders concerned with airport facilities, ground services and equipment will be present at this show.

Information on participation should be directed to International Airport Expositions, 62-64 Victoria St., Herts, AL13XT St. Albans, England.

Worldwide Business Outlook

U.S. Sales Picture In Spain Mixed; Government Opts To Maintain Growth

Spain will enter 1975 under even more uncertainty than it began the present year and from a position of less economic strength.

This year is proving to be a generally satisfactory one for the Spanish economy—disappointing in terms of 1972 and 1973 but better than forecast—and a mixed period for American exports to Spain. The U.S. Embassy in Madrid expects U.S. sales of something over $2 billion in 1974, a 100 percent increase since 1972, but points out that much of this gain is in the form of inflated value and that early 1974 figures show a decline in U.S. market share. Nevertheless, there has been a substantial increase in U.S. sales volume, and continued industrial expansion in such areas as automobile manufacturing and its supplying industries, petroleum refining and iron and steel production offers excellent opportunities for expanded U.S. investment and increased U.S. exports to Spain.

Economic statistics for 1974 will be inferior to those of the preceding year, but should still be reasonably satisfactory. Real growth on the order of 4 to 5 percent and per capita income in excess of US$2,000 at current prices seem probable for the whole of 1974. Consumer demand remains strong but industrial production is off somewhat.

The increase in the cost of living, which in 1973 topped 14 percent, can be expected to hit 18 percent or even higher in 1974, and the short to medium-range prospect is for more of the same. This is a factor of considerable concern.

Faced with the choice of maintaining an acceptable rate of growth and a minimum of unemployment, or applying the brakes to control price levels, the Spanish Government has opted for the former at the cost of some further inflation. But while economic policy has not entirely ignored the prevailing inflationary situation (the Central Bank rediscount rate was raised in August to 7 percent from 6 percent), the rate of inflation continues to increase.

Foreign exchange reserves remain high for the present, but they declined about 8 percent in the first five months of 1974 and will no doubt come under increased pressure over the next 12 months if anything like the present rate of increase in imports continues. Tourist arrivals have dropped for the first time in memory although foreign exchange earnings from tourism increased slightly, and the picture with regard to remittances from Spanish workers abroad is cloudy.

Spanish trade statistics for the period January-June showed imports from the United States totaling $1,295 million compared with $850 million for the same period of 1973, a 52 percent increase. (In 1973 U.S. exports to Spain rose 47 percent.) If this trend continues U.S. exports to Spain during 1974 will reach $2 to $2.5 billion. Exports of U.S. agricultural products reached $396 million, 85 percent above January-June 1973. This gratifying performance on the part of U.S. exporters should not be a source of complacency, however, since much of the increase represents higher prices and because the U.S. share of the Spanish import market declined to 17.5 percent for the first half of 1974 compared with 19.0 percent for the first half of 1973.

While the value of American exports to Spain has increased tremendously in the past 18 months, the recent decline in tourist travel to Spain from the United States is taking its toll of chartered air service between the two countries.

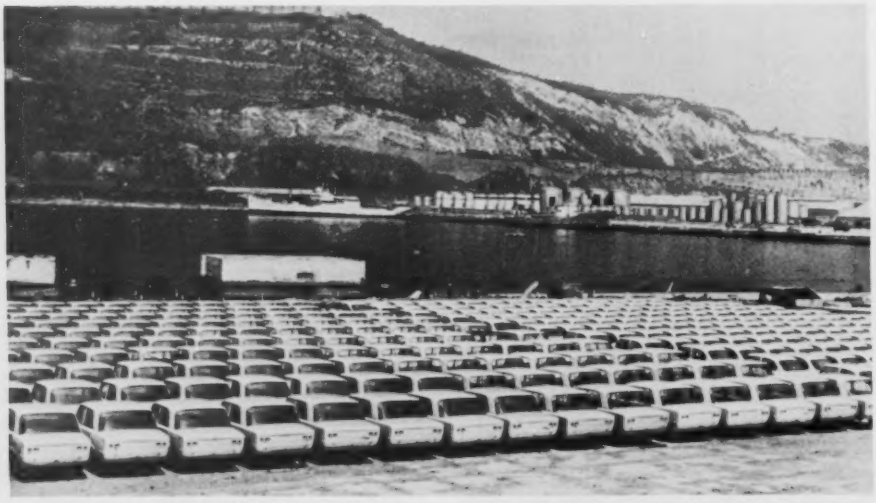
Spanish exports to the United States are growing, but at a much lower rate (7 percent for the first half of 1974) than U.S. exports to Spain. Imposition by the United States of 3 and 2.9 percent surcharges (countervailing duty) on Spain's two principal exports to the United States, footwear and olives, to compensate for Spanish export subsidies, could cut into Spanish sales.

There are numerous opportunities for U.S. products in the attractive Spanish market. As noted, the Spanish Government has opted to maintain full employment and continued growth in industrial production. High priority has been accorded the iron and steel industry, with the objective of achieving 90 percent self-sufficiency by 1980; petroleum refining, in order to increase the present capacity of 50 million metric tons per year to 86 million metric tons by 1980; the energy sector through the greater use of nuclear power and natural gas; minerals production through increasing output of iron ore, phosphates, lead, zinc and other minerals; shipbuilding (Spain is now fourth in the world in orders received); agriculture and food processing; chemicals; and tourism.

The INI (Instituto Nacional de Industria), the autonomous government holding company having direct participation in some 58 enterprises which account for about 10 percent of Spain's gross industrial output, is also planning a major expansion of its activities. The Spanish Government continues to welcome foreign investment and technology. Spanish industry, both national firms and foreign subsidiaries and affiliates, is undertaking major expansion projects in order to compete with larger enterprises in other countries. Producers are also greatly interested in labor saving systems and equipment to offset the steadily increasing cost of labor in Spain.

Key industrial targets of opportunity for U.S. products in the Spanish market include metal working equipment, medical and health care equipment and instrumentation, equipment and components for the electronics industry, automotive diagnostic, test and service equipment, food processing and packaging equipment, electronic data processing hardware and software, and materials handling systems and equipment.

U.S. consumer goods would do well in Spain if U.S. companies in this field would carefully research the Spanish market and then undertake a sustained effort to promote their goods. Direct investments and manufacturing licensing arrangements also present attractive opportunities in Spain.



AWAITING SHIPMENT FROM SPAIN—*Spanish-made autos are shown ready for export from the port of Barcelona. The Spanish economy has remained reasonably active in 1974.*

Indonesia's Growing Financial Strength Can Help Traders; Investors Cautious

With total budget receipts doubled by oil income, favorable prospects for further accumulations of foreign exchange, and indications that inflation is coming under closer control, Indonesia's economic outlook appears promising for the remainder of 1974 as well as 1975. Trade opportunities will be expanding rapidly during the same period, adds the U.S. Embassy in Jakarta, but investors are facing some special problems in Indonesia.

Beyond 1975 the difficulties of providing employment and more even distribution of income, and of restoring investor confidence and investment levels offer a sobering challenge to the most optimistic planner. Timber, textiles and a broadening range of domestic industries are likely to feel the pincers of reduced foreign demand from one side and tight local credit from the other.

The first half of 1974 saw developments of broad and lasting importance for Indonesia's foreign economic and commercial relations. The Jakarta riots of January and government policy responses to them mark a watershed in official Indonesian attitudes toward foreign and domestic investment, accelerating the trend toward restriction of foreign investments. These policy developments corresponded in time to the 3.5-fold increase in Indonesia's oil export prices after October 1973. This boon to its financial strength has stimulated Indonesia's self-confidence and ambitions in undertaking directly, via government and state enterprise ownership and financing, an increasing number of projects previously scheduled for foreign investment or foreign aid financing.

Trade opportunities promise to expand rapidly. Implementation of massive oil, mining, petrochemical, fertilizer and many other private and government projects will peak in 1974/75. In addition, the government has expanded its shelf of major projects in search of financing. Indonesia will make decisions in the next 12 months on construction and procurement for more than a dozen major projects with investment values well over $3 billion. These will draw on the current $900 billion of aid pledges and previously accumulated aid funds.

Disquieting as were the riots, the government's policy statement calling for ultimate *pribumi* (Indonesia) majority ownership of enterprises was far more unsettling to active and prospective investors. Following the announcement of the new policy by President Suharto on Jan. 22, government agencies began to issue decrees and regulations to implement the policies, which created further uncertainties for the foreign investor. Illustrative was announcement of a $100-per-month "compulsory contribution" for each expatriate employee of foreign enterprises which did not have a training program designed to replace most of the expatriates over stated periods of time in various categories. The Directorate General of Forestry is thus far the only agency to issue an implementing regulation; however, uncertainty persists about future applications in other sectors.

Also clouding investment outlook

Other factors also cloud the investment outlook:

- The government has still to resolve differences over the terms of its draft third generation model mining contract with the result that no new mining contracts have been concluded since June 1972. Some 22 foreign companies' applications await their resolution.
- Port congestion compounded by changes in customs procedures caused record delays at Jakarta's port through June, impeding transit of investment goods and other imports. Lengthened work hours, increased storage and other fees, and diversion of cargo to other ports have lessened the problem, at least temporarily, but shipping conference freight rate surcharges still remain in effect, reflecting the delays encountered by ships discharging cargo at Jakarta.
- Greater restrictiveness in issuance of expatriate visas and work permits, escalated costs for land and housing, and venality of officials in customs, immigration and some other public services.
- New responsibilities and procedures of the Capital Investment Board have slowed processing of investment approvals despite the government's earlier intention to accelerate this process.

Experienced observers expect that over time decisions on implementing Indonesia's new restrictive policies will prove pragmatic and will not unreasonably restrict the scope for foreign investment; however, it will take many months for government officials to resolve all the practical questions of implementation.

The January events have not deterred several U.S. investors with long-established and profitable operations from moving forward with large expansion and diversification plans. Major resource development and processing projects by U.S. firms also continue to move forward.

Despite the many difficulties, important investment opportunities remain in selective sectors—particularly in major resource development and processing (oil, natural gas, chemicals, wood and rubber products), in joint ventures with the state oil company, PERTAMINA in resource and technical service fields, in servicing and production to supply major foreign or government projects, in labor-intensive technology and export processing industries (especially if products warrant export by air), and in large-scale manufacturing able to afford high overhead expense.

While the investment incentive and other provisions of the Foreign Investment Law remain intact, new investors will find initial entry forms tougher than those given under the Law prior to 1974, mainly in the form of (a) less liberal grants of tax incentives, (b) requirements for higher minimum initial Indonesian participation (usually at least

MORE FOREIGN EXCHANGE FOR INDONESIA—*Higher exports and foreign exchange earnings have contributed to Indonesia's economic upturn. Here, loading rubber at Sumatra.*

20 percent, with exceptions possible in special cases such as electronics) and (c) requirement for a specific schedule of Indonesianization of personnel in all categories.

The tapering off of U.S. investor interest outside the resource sector may dampen some U.S. export opportunities, but other factors will likely cause a far greater acceleration of such opportunities.

On top of the $900 million of current foreign aid pledges (and some $400 million in the pipeline), Indonesia in FY 1974/75 can look forward to at least one or two times that much more in increased foreign exchange reserves. This not only gives Indonesia increased potential to accelerate its development projects by self-financing, but also gives it increased backing for greater borrowing in the international markets. As a result, Indonesia is actively seeking a much greater volume of intermediate-term quasi-commercial (Eximbank-type) financing, and the government has for the first time since 1965 stated its willingness to guarantee state agency and enterprise borrowings for high-priority projects.

The result could be expansion of government development plans. The government can now bypass some difficulties in obtaining financing and in meeting procedural requirements of foreign assistance donors and lenders by self-financing at least initial stages of priority projects. This capability will be particularly advantageous now when medium and long-term international financing is hard to come by. Government financing could also facilitate launching of private investor projects impeded by financing problems, but important to Indonesia's development goals.

In many cases, the lead time between project conception and selection of bidders and suppliers may be shortened. Trade and service opportunities in Indonesia in 1974/75 will go more often to those present (in Indonesia) and quick to respond.

In recognition of Indonesia's improved foreign exchange outlook and its greater willingness to consider selectively government guarantees for priority projects, the U.S. Eximbank is reviewing the possibilities of expanding its lending to Indonesia. The Indonesian Government has submitted requests to Exim for financing of roughly $1 billion in new projects.

Since Indonesia's financial situation has improved, the IBRD and ADB have now hardened their lending terms to Indonesia. More importantly, in recognition of Indonesia's large continuing need for assistance to meet its poverty and population pressures, both the IBRD and ADB have significantly increased their total lending there, from a combined total of $150 million last year, to roughly $330 million for FY 1974/75. Thus U.S. firms looking for business opportunities in Indonesia should give more than usual attention to IBRD and ADB project plans.

U.S. firms should assure that they prequalify for inclusion on the short lists of bidders qualified for projects funded by these institutions.

In June the World Bank announced three credits for Indonesia which are of serious interest to U.S. firms. The IBRD is providing $48 million as part of a $158 million project for rehabilitation of Indonesia's railroads, including new locomotives and rolling stock, $16 million for tourism in Bali and $6.5 million for fisheries development on IDA terms.

Zambia Rebounds After Slowdown; Marketing Efforts Can Be Rewarding

Zambia has made good progress in developing the basis of a prosperous economy. Prospects are good for an improvement in business confidence and a faster rate of development, in the opinion of the U.S. Embassy in Lusaka.

The overall performance of the Zambian economy was sluggish in 1973 and early 1974, due primarily to four factors: 1) drought conditions until November 1973; 2) continuing transport and supply difficulties stemming from the Rhodesia border closure; 3) the inevitable delays in putting increased capital available for investment to productive work; and 4) the preoccupation of decision-makers with national politics.

With copper prices continuing at high levels, with the promise of a good harvest after a season of heavy rains, and with a new government exhibiting new attitudes and ideas, performance in recent months has distinctly improved. American exporters willing to work hard at penetrating and serving the Zambian market should find the effort rewarding, as imports are expected to rise some 25 percent, to at least $700 million, in full-year 1974, much of it capital equipment. Investors, on the other hand, may be cautious until outlines of the government's policy toward foreign investment become clearer.

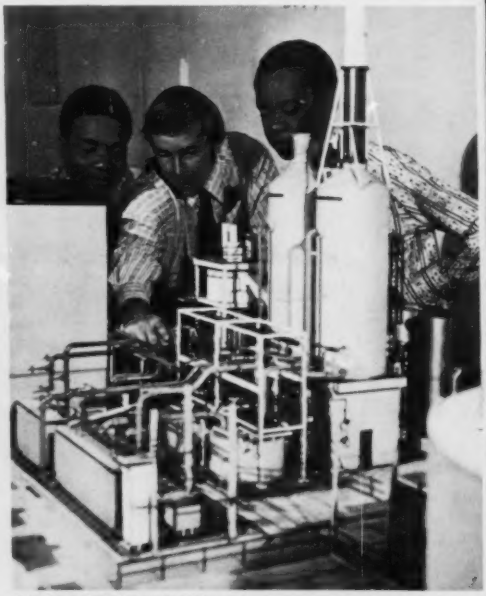
A report on a mining and related equipment trade mission to Zambia appears on page 23.

During the past two years when resources were scarce, Zambia concentrated on completing projects already begun such as a motor vehicle assembly plant at Livingstone, a refinery and a lime factory expansion at Ndola, a glass factory at Kapiri Mposhi. With more funds available and the intense political activity of 1973 now over, progress can be made on several projects for which major contract decisions have already been reached in principle: a compound fertilizer plant at Kafue, a truck assembly plant at Kasama, a battery plant at Mansa, and expansion of a sawmill near Livingstone.

In addition, several infrastructural projects are either under way or about to begin: a telex system in Lusaka; a 600-megawatt hydroelectric station at Kariba; a feeder dam and 300-megawatt expansion of the hydropower station at Kafue; a radio-TV information center complex in Lusaka; a major expansion of the nation's telephone network into rural areas; and a microwave relay system to the Tanzanian border.

While these projects, together with the copper expansion program, make up a respectable list, they are modest compared to several proposals now under active consideration: a 200,000-ton per annum iron and steel mill; a hydro-carbon cracking plant; a major expansion of the copper fabricating plant at Luanshya; an entirely new mining and concentrator project involving low-grade ore in Northwestern Province; and a 450-megawatt "stage 3" hydroelectric power station at Kafue.

In formulating, approving and promoting projects, the government has been giving priority to those which exploit local resources, reduce imports and offer the promise of exports when local market needs are met. Other major considerations are the need to expand employment opportunities —although, for the most part, capital-intensive methods are still preferred—and to secure access to essential products in the face of supply shortages and transport difficulties. Protection, usually in the form of a guaranteed market, is generally still being offered to local industries, but there are



ZAMBIANS LEARN—*Trainees and instructor examine a model of the Luanshya sulphuric acid plant at a University of Zambia class.*

signs the new government will be cool to projects which will require such support indefinitely.

As the government is currently playing a preponderant role in the economy, most new projects of significance have been joint ventures between foreign companies and parastatal firms, the latter with at least financial control. There are still opportunities for wholly private companies, however. The pattern recently has been for a marketing and servicing company to begin manufacturing one or more of its products locally. Sometimes the motivation is operating efficiency; sometimes, perhaps with government encouragement, a company seeks thereby to maintain its access to the market; in one case (a German company), the aim was to produce clothing for export to the German market.

Key figures in the new Zambian Government have hinted that no further nationalization of existing industry is contemplated. While they have not yet indicated what types of private investment would be welcome or what guarantees will be offered, they have said an investment code is being drafted to spell out these points in considerable detail.

After a drought year when marketed production actually fell, 1974 promises to mark a turning point in Zambia's agricultural sector. Not only were the rains abundant, but the government announced a series of measures designed to encourage greater production and investment: 1) much higher prices for key controlled commodities in short supply or with export potential like oil seeds, cotton, peanuts and livestock; 2) a partial lifting of price controls on fruits and vegetables; 3) tax incentives to farmers in the form of immediate write-off of capital equipment costs; 4) easing of import restrictions for agricultural inputs; and 5) increased attention to the growth of small family-farm schemes through capital inputs (especially from the World Bank), experimentation with new, labor-intensive cash crops (e.g., tea, coffee, rice), and expanded training opportunities. These measures, plus a little luck, should yield an increase in real agricultural output of at least 20 percent in 1974 and create the conditions for even more expansion in the future.

While Zambia is a difficult market to penetrate because of old, established trade ties with the United Kingdom and South Africa, it offers opportunities related to growth and diversification which cannot be ignored. In recent years, the United States, with about 10 percent of the total import market, has vied with Japan for third place among Zambia's suppliers. Continuation of present trends suggests Zambia might be importing $1 billion annually within two or three years, much of it sophisticated mining and other capital equipment, markets in which the United States is highly competitive. And, unlike most other suppliers, U.S. firms can offer reasonably fixed prices to Zambian importers because the kwacha is tied to the U.S. dollar.

Should the Zambian Government maintain and intensify present pressures on importers against South African sourcing, the United States could benefit more than any other country—provided American exporters are persistent in pursuing opportunities, able to supply as quickly as competitors and willing to provide good after-sales service, including the provision of spares.

In addition to a broad spectrum of equipment for the mines and for the major projects mentioned, U.S. suppliers should find good markets for chemicals, medicines and medical equipment, food processing and packaging equipment, data processing systems, construction equipment, general aviation aircraft (if current import restrictions on such aircraft are eased), animal feeds, breeding stock, irrigation systems and farm equipment. To exploit opportunities in the promising agricultural sector, the U.S. Agricultural Attache in Nairobi has been accredited to Zambia. Nearly all exports from the United States can be financed with the $5 million AID program loan signed last year or with credits of the Export-Import Bank, whose exposure in Zambia is nearing $100 million. Three local banks offer "cooperative financing facilities" which can be useful in supporting U.S. exports of modest monetary value.

Investment in Zambia by U.S. firms is by no means a novelty, and a bilateral investment agreement covering OPIC insurance has been in effect since 1966. While the equity interests of American Metal Climax and individual Americans in Roan Consolidated Mines dwarf all others in value, there are some 50 U.S. firms with direct or indirect investment in Zambia. Moreover, the new Zambian Government has repeatedly expressed a desire for more. Companies now there have clearly found it profitable to remain—and even expand.

Prospective investors will be attracted by Zambia's political stability, economic infrastructure, and rapid pace of social development. However, a significant inflow of American companies is constrained by limitations on profit remittances, lack of a clear government policy on foreign investment, cumbersome procedures, and inadequate investment guarantees.

Eastern Europe Is Focus At Tennessee Conference

A conference on Oct. 22 for Tennessee area businessmen will pinpoint opportunities for doing business with Eastern European countries and also provide basic information on export administration regulations for all countries in the region.

Government assistance related to the subject of *Doing Business with Eastern Europe* will be presented by Pompiliu Verzariu, Trade Development Officer with Commerce's Bureau of East-West Trade. Firsthand information from a businessman will be given by Alan L. Hofstein, Vice President—Sales, Ortec, Inc. of Oak Ridge. The subject of export licensing rules and procedures will be covered in an afternoon session by Daniel E. Cook of Commerce's Office of Export Administration, and other Commerce Department services for exporters will be discussed by Theron J. Rice, Jr., Trade Specialist with the Commerce District Office in Memphis.

The conference will be held at the Holiday Inn in Oak Ridge.

Travelers, Agents Invited To East Africa Conference

U.S. business representatives will have a unique opportunity this month to meet with Commercial Officers from American Embassies throughout Eastern Africa. The occasion will be a Regional Commercial Officers Conference Oct. 24-25 in Nairobi, Kenya, to exchange marketing information and ideas and to develop recommendations for new trade promotion events and techniques.

After the first day's round of conferences among the Commercial Officers themselves, the second day will be devoted to meetings with U.S. businessmen and representatives of agents of U.S. companies to discuss individual country markets for their products and explore ways that the Foreign Service can assist companies in their marketing efforts. Business representatives based in Nairobi are being invited, and others who may be traveling in the area are encouraged to attend.

Interested businessmen may contact the U.S. Embassy in Nairobi or the Africa Division of the Commerce Department. The other Foreign Service Posts involved will include those in Sudan, Ethiopia, Somalia, Uganda, Tanzania, Rwanda, Burundi, Malawi, Zambia, Mauritius and the Malagasy Republic.

Taiwan Cuts Import Duties On Many Agricultural Goods

The Republic of China has reduced import duties on approximately 200 agricultural items. The reductions range from 62 percent on corn and other bran cereals to 6 percent on inedible animal oils and greases. Lowered rates are also shown for poultry, fruits, vegetables, and various sauces and seasonings. Other agricultural items included in the reduced tariff schedule are pigs bristles, badger hair, other brushmaking hair and tortoise shell.

Specific information concerning reduction of Taiwan's duties on these and other products may be obtained from the Far East Division, OIM/BIC, U.S. Department of Commerce, Washington, D.C. 20230.

Nepal, Neglected By U.S. Business, Has Some Appeal

Nepal's great distance from the United States, its remote location between India and the People's Republic of China, the small size of the local market and low demand for sophisticated products, traditional trade ties with India, and strong competition from countries with price or transport advantages has thus far kept U.S.-Nepal trade at an annual average of only about $3 million. While opportunities by U.S. standards are at present limited, there are projects and potential sales—many of which are identified in this report from the U.S. Embassy in Kathmandu—which will appeal to some American companies. Moreover, the Embassy advises U.S. businessmen to examine the Nepalese market not only for the limited sales opportunities at present, but also for the long-term potential.

In view of continuing and expanding government expenditures on development projects, for example, there will be increasing opportunities for provision of materials and equipment, for engineering and design services, and for feasibility studies in sectors as diverse as transportation, tourism, agro-business, telecommunications, hydroelectric power and aviation. Many of these opportunities will be connected with credits from international lending institutions.

U.S. firms may be able to develop sales through response to government tenders. Many items such as heavy construction equipment, automobiles and parts, office equipment, etc., are imported directly by government departments for their own use or through the state-owned National Trading Co. Ltd. In most cases, U.S. firms doing business in Nepal have found it advantageous to obtain the services of a competent local representative. Close contact with the appropriate authorities in government departments as well as knowledge of local market conditions are essential to commercial success in Nepal.

NEPALESE TERRAIN—*Wood carriers pass ropeway stanchion as they make the final climb to the Dhara Pani Deorali ridge before descending to Kathmandu. View looks south.*

IBRD-IDA projects in Nepal provide opportunities for U.S. firms. One American firm has been supplying telecommunications equipment to Nepal under the proceeds of an IDA loan for the communications sector. In the tourist sector, the IBRD has committed $4.2 million for expansion of the Annapurna Hotel and construction of a new hotel; prequalification tenders were issued some time ago through the Nepal Industrial Development Corporation. Additional tenders will be issued for ancillary equipment. Tenders for the Narayani Irrigation Project, to be financed by an IDA credit of $6 million, have begun to come out for pumps and tubing.

IDA has also recently agreed to extend a loan of $7.8 million to Nepal for a drinking water and sewage project for Kathmandu Valley and Pokhara. An American firm has won the contract to do the design phase of the project and to supervise construction; tenders for materials and supplies have not yet been issued. Nepal has also received an IDA credit of $6 million to finance projects for the removal and sale of timber in the Terai for resettlement. This may provide opportunities for the sale of U.S. logging and sawmilling equipment.

Development in the aviation sector provides opportunities for U.S. firms. With the acquisition of a Boeing 727 by Royal Nepal Airlines Corporation (RNAC) in 1972, Nepal entered the jet age. The government is known to be interested in acquiring new routes for RNAC and may therefore be in the market for an additional jet in the not too distant future. For some time the government has been considering the purchase of additional helicopters and although no decision has yet been made American firms have been actively pursuing this opportunity. Given the nature of Nepal's terrain, helicopters will undoubtedly be an important factor in Nepal's future transportation network, and American helicopters should be in a good competitive position vis-a-vis European.

Work is continuing on improvement of Nepal's airport under proceeds of an Asian Development Bank loan. Designs are now being drafted for a new terminal building at Kathmandu's Tribhuvan Airport, with tenders expected in about six months.

Opportunities for U.S. firms have also been increasing in the surface transport sector, with the rapid development of roads in Nepal. The Nepal Transport Corporation is considering a program for the acquisition of new trucks, needed for both domestic service and to transport goods from Calcutta's port. Under the 1971 Trade and Transit Treaty with India, Nepal is permitted to transport goods through India in sealed containers and Nepal lacks trucking facilities of this type. Information has been requested from major American manufacturers of engines and bodies and responses from several firms have been received.

Activities of the Asian Development Bank have also increased significantly. Loans authorized to Nepal now total more than $40 million, with the most recent projects providing funds for procurement of equipment for agricultural development, including 150 tractors, 300 power tillers, 120 mechanical dryers and cold-storage units. Tenders have also been issued for construction of the ADB-supported Hetauda-Narayangarh Highway, estimated to cost $11 million.

Over the longer term there should be good opportunities for U.S. firms in the hydroelectric field, where Nepal has enormous potential which is only now beginning to be developed. While still a long way down the road, the billion dollar Karnali Project is receiving increased attention from both the governments of India and Nepal. With increasing fuel costs and growing shortages of power in India, the economics of the Karnali Project have become more attractive. There are also a number of smaller hydroelectric projects now on the drawing boards that will provide opportunities for U.S. equipment.

While there has been some incipient interest in mineral, mining and petroleum ventures, the only U.S. investment in Nepal has been limited to one small tourist hotel. Prior to the oil crisis, and the concern it engendered over the tourist industry, several international hotel chains had been interested in building new hotels in Kathmandu. Unfortunately, nothing has yet been done. Tourists continue to pour into Nepal and hotel accommodations continue inadequate.

While some implementing regulations have yet to be worked out, industrial investment in Nepal is now subject to the government's new industrial policy. It provides for annual repatriation of 10 percent of foreign capital invested and 25 percent of the profits made on such capital; exemption from import duties for machinery and equipment; long-term credits on favorable terms depending upon the priority attached by the government to the particular investment; and tax holidays ranging from three to 18 years depending upon the amount of capital investment and attendant employment opportunities. Industrial ventures with a total investment of $500,000 or more may be wholly owned by foreigners. For newly established joint ventures with a total investment between $100,000 and $500,000, foreign ownership up to 49 percent is permitted.

International Business Reports

New From Japan. Special service of General Electric's Technology Marketing Office in association with the International Technical Information Institute. $275 for annual coverage of one technical category, $950 for all five categories.

Provides information on new developments in Japanese technology in a series of biweekly reports developed from direct contact with leading Japanese industrial companies, universities, and private and government research institutions. The International Technical Information Institute, a Japanese information-gathering firm, supplements these sources by continually monitoring Japanese trade journals and business press, and following up by investigation where warranted.

The New from Japan clearinghouse is divided into five categories of broad technical interest: mechanical devices and manufacturing processes; electronic, electrical devices, and measurement instrumentation; metallurgy and materials; chemicals and chemical processes; and environmental and pollution control. Every two weeks, each subscriber is sent information on technical developments in each of the categories he has chosen to receive. The information includes a description of the technology, its applications, quantitative data about it, and an assessment of its stage of development. In addition, each report includes the name and address of the source company directly responsible for the specific development, allowing direct contact with the company or individual concerned.

Write: Roy Roecker, Business Growth Services, General Electric Co., Bldg. 5, One River Rd., Schenectady, N.Y. 12345.

Foreign Investment in the United States. Published by the Chamber of Commerce of the United States. 120pp. $10.

Developed from the proceedings of a recent symposium, this book contains analyses of the major questions, pro and con, relating to the accelerating flow of foreign direct and portfolio investment in the United States. Special attention is given to the concern of potential foreign investors for the possibility of new, restrictive U.S. legislation. A cross-section of Congressional views on the implications of foreign ownership of American resources is provided.

Write: Chamber of Commerce of the United States, 1615 H St., NW., Washington, D.C. 20062.

Prospects for Export to USSR. By Jan Solecki. 25pp. $4.

This is a marketing report on prospects for export of forest products machinery to the USSR. Professor Solecki of the University of British Columbia explains in practical terms the variety of forestry practices in the Soviet Union and their relationship to requirements for timber harvesting and forest products processing machinery and equipment by that nation.

Incorporates a map which defines the timber regions across the USSR in terms of types of stands and the mechanical requirements and potentials of each, as assessed by Solecki, compiled from on-site visits and studies. Management techniques and production technology are explained.

Write: Forest Industries Resources, Int., 300 Hughes Bldg., Portland, Oregon 97204.

Economic Surveys on Australia, Germany and Japan. Published by the Organization for Economic Cooperation and Development. $1.25 per country.

These are annual reviews of the economies of the subject countries, prepared by the OECD Economic and Development Review Committee.

Write: OECD Publications Center, Suite 1207, 1750 Penn. Ave. NW., Washington, D.C. 20006.

Marketing Your Skills After Retirement, 86pp., $5.95; Marketing Your Skills in Australia, 69pp., $8.50; Resumes for Overseas Employment, 73 pp., $5.95. By Juvenal L. Angel.

The first publication "offers suggestions for senior advisors and for those mature men and women who are eager to remain active during latter years." In the second, the author advises persons seeking employment in Australia that, in almost all instances, American firms operating in Australia recruit American personnel through their head offices in the United States, and suggests that working quotas and laws and regulations of Australia be investigated before accepting employment there. In the last book the field of foreign operations and employment is discussed and model resumes are shown for persons seeking such employment.

Write: World Trade Academy Press, Inc., 50 East 42nd St., New York, N.Y. 10017.

Calendar For World Traders

Oct. 15-17—New York—Three American Management Association briefings on Trade and Investment in the Middle East (Iran, Oct. 15; Saudi Arabia, Oct. 16; Egypt, Oct. 17). Speakers at each session will include Peter Hale of Commerce's Near East-South Asia Division.

Oct. 16—New York—International Executives Assn. meeting, The Biltmore. Opportunities in Brazil will be topic for discussion.

Oct. 17—Chicago — International Trade Club of Chicago meeting, Hyatt Regency Hotel. Everette B. Harris, president of the Chicago Mercantile Exchange and the International Monetary Market, will discuss The Dollar and Gold.

Oct. 21-23—New York—American Management Association briefing on Evaluating Business Prospects in Southeast Asia. Speakers will include Thomas Moore, Irvin Lloyd and Ann Brosnan of Commerce's Far East Division.

Oct. 22—Oak Ridge, Tenn.—Conference on East-West Trade, Holiday Inn. Sponsors: Memphis District Office, Oak Ridge Chamber of Commerce, Kentucky-Tennessee District Export Council. Speakers will include Daniel Cook and Pompiliu Verzariu of Commerce's Bureau of East-West Trade.

Oct. 28-30—Ann Arbor—Seminar on How to Benefit from Improved U.S. Position In World Markets: Exports Through Agents and Distributors, Campus Inn. Sponsors: Institute for International Commerce of the Univ. of Michigan, Detroit District Office.

Oct. 30—New York — Annual FCIB Roundtable reception/luncheon/conference, Carl Hoppl's Westbury Manor. Topic will be Foreign Credit, Collection and Exchange Problems and Procedures.

Nov. 4—New York—FCIB Round Table Conference on International Finance, Credit, Collection and Exchange Problems, Summit Hotel.

Nov. 6—New York—American Management Assn. session on East-West Trade. Lewis Bowden, Acting Director of Commerce's Bureau of East-West Trade, will chair panel.

Nov. 6—Atlanta—Institute for International Business session. Albert Planagan of Commerce's Bureau of East-West Trade will speak on East-West Trade Development, Market Potential and Procedures.

Nov. 6-8—New York—World Trade Institute symposium on Foreign Licensing and Technology Transfers: U.S. and Foreign Law, Practice and Trends.

Nov. 13—Atlanta—Seminar on Doing Business in Near East, Stouffer's Inn.

Nov. 20-22—New York — Foreign Tax Credit workshop, and course on expanding export opportunities; both at the World Trade Institute.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means of communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about U.S.-sponsored exhibits abroad, licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

U.S. Promotions Abroad

Dakar International Fair. Nov. 25-Dec. 15. A U.S. exhibition sponsored by the American Embassy will feature a variety of products and services aimed at the expanding markets of West Africa. Apply directly to: Shaun Donnelly, Commercial Attache, U.S. Embassy, B. P. 49, Dakar, Senegal. General information available from Brad Tyrrell, 202-967-4304.

Vacuum and Cryogenic Equipment Technical Sales Seminar to Czechoslovakia, Hungary and Romania. Dec. 1-14. Participants are sought for a 7-member seminar covering industrial, laboratory and medical applications of vacuum and cryogenic technology. Presentation of technical papers will be followed by business meetings with appropriate institutes, foreign trade officials and industrial trusts. Call Fred E. Crosley, Jr., 202-967-5285.

High Performance Production Materials. London Trade Center. Dec. 2-6. The United Kingdom is one of the world's largest buyers of U.S.-manufactured high performance products and use of these materials is expected to grow at a high rate for many years. British manufacturers have expressed special interest in specific new techniques and materials for producing reinforced plastic high-temperature/high pressure plastics, super alloys, sintered and other powder metal forgings and castings and silicon carbide ceramics. Other products also have high sales potential. Call Gary Bouck, 202-967-4461.

Home and Office Furnishings (JEEP). Singapore Trade Center. Dec. 4-6. The boom in home and office construction in Singapore and rapidly increasing personal incomes offer an excellent opportunity for U.S. interior decorating firms and manufacturers of high quality household and office furniture, carpeting and other products for interior decorating, to enter the Singapore market. Limited to new-to-market U.S. firms. Call Fred Farmer at the Greensboro, N.C. District Office, 919-275-9111.

Pollution Control Equipment. Stockholm Trade Center. Dec. 9-13. U.S. manufacturers and suppliers of air and water pollution control equipment, solid waste treatment equipment and noise abatement equipment have an outstanding opportunity to introduce new products and improve their share in the expanding Scandinavian market. Recent market research conducted in Denmark, Finland, Norway and Sweden points to continued high demand, especially for sophisticated detection and control equipment. Call Dave Brann, 202-967-4443.

Printing Trades Machinery Supplies and Service Trade Mission to Nigeria and Ivory Coast. Jan. 6-17. Nigeria is potentially the largest market in Africa for the printed word and has a growing need for printing equipment and supplies. Ivory Coast imports substantial amounts of equipment. This mission will expose a number of good sales prospects. Contact Bill Bushwaller, 202-967-4511.

Pollution Control Equipment Catalog Exhibition. Taiwan, Korea, Philippines, Hong Kong. Jan. 13-24. Taiwan's first pollution control legislation, the Water Pollution Prevention Law, was passed in July. An Air Pollution and Waste Disposal Law is expected to be enacted by the end of 1975. Compliance with the two laws will require the purchase by Taiwan industry of several hundred million dollars worth of anti-pollution equipment. Since the mid-sixties, Korea has industrialized at one of the fastest rates in the world, with the consequence that it suffers from the full gamut of environmental despoliation. Korea is spending large sums of money to keep pollution control abreast of industrialization and urbanization. In the Philippines, various aspects of water pollution constitute major areas of market potential. These include the cleanup of the Pasig River, which flows through the heart of Manila, required installation of anti-pollution devices in industrial establishments, a flood control and sewage disposal project and expansion of the potable water supply in Manila. Industrial air pollution has the next priority. The Hong Kong Government has taken several initiatives to improve the quality of the environment: a campaign to keep Hong Kong clean and a study of oil pollution of harbors and of air pollution. American technology and equipment in this field could definitely find a role. Call Robert E. Peterson, 202-967-3973.

Modern Merchandising. Frankfurt Trade Center. Jan. 14-17. The U.S. is one of Germany's leading suppliers of point-of-sales, materials, handling, security, background music, and other equipment for the wholesale and retail trade. Purchase of mrechandising equipment are expected to grow rapidly during the next three years, with continued imports from the U.S. Call William Dawson, 202-967-4941.

Avionics and Airport Support Equipment. Milan Trade Center. Jan. 14-18. The Italian aviation industry is commencing an upsurge in development and requires the most advanced and updated forms of equipment. Rough estimates put Italian market potentials for avionics equipment in 1975 at $28-$31 million, while the market for support equipment is virtually unlimited. The Italian Government has recently approved the expenditure of $159.5 million over four years for airport support equipment. Call Mara Yachnin, 202-967-2434.

Medical Equipment and Supplies (JEEP). U.S. Regional Trade Center, Singapore. Jan. 15-17. The Government of Singapore has begun a $50 million program for expansion and modernization of health care facilities which will require substantially increased imports of modern medical equipment and supplies for the next five years. It is estimated that the Ministry of Health will spend $8 million for imported medical equipment in 1975 and similar amounts in following years. This event offers U.S. manufacturers the opportunity to establish representation in the Singapore market for long-term sales. Contact Norman Lawson, U.S. Department of Commerce District Office, Room 161, New Customhouse, 19th and Stout Sts., Denver, Colo. 80202, telephone 303-837-3246.

Solid State Semiconductor Components Exhibition. U.S. Trade Center, London. Jan. 20-24. The United Kingdom is one of the world's largest producers of commercial, industrial, and consumer electronic products, and is, therefore, one of the world's largest consumers of electronic components. Britain was also the second largest export dollar earner for U.S. electronic components in Western Europe in 1973 for solid state semiconductor devices, cathode ray color television picture tubes, and passive electronic components. The dollar value of apparent consumption of solid state semiconductor devices is expected to increase in Britain by 27 percent by 1977. Call Robert J. Blake, 202-967-3088.

Scientific & Industrial Instrumentation Catalog Exhibit. Casablanca, Morocco. Jan. 20-24. Heavy capital investments by the Moroccan Government will greatly increase demand for scientific and industrial instrumentation. By 1976, Moroccan imports of instruments are expected to reach $7.1 million, with good prospects for U.S. sales of well over $1 million. Call Robert E. Peterson, 202-967-3973.

Industrial Instrumentation. Mexico City Trade Center. Jan. 20-24. The Mexican market for instruments for use in industrial applications is growing at a rate approximately twice as fast as the economy in general. Opportunities are open to manufacturers of industrial process control, materials test and analytical instrumentation, as only basic instrumentation is produced in Mexico and U.S. equipment is well known and preferred. Call Porter Clary, 202-967-5040.

Agricultural Equipment and Supplies Catalog Exhibit. Cameroon and Malagasy Republic. Jan. 20-31. Agriculture is one of the most important economic sectors in Cameroon and Malagasy and the use of modern agricultural methods is being strongly encouraged by the governments. Modern cultivating, harvesting, spraying and other mechanical equipment as well as chemicals to combat tropical crop diseases and livestock pests are in great demand. For more information call Robert E. Peterson, 202-967-3973.

Electronics Trade Mission. Switzerland and Spain. Jan. 24-Feb. 5. Due to the expanding industries in these European countries there is a booming market for products of an electronic nature which are geared to increased efficiency and allow modernization. Best possibilities for increased exports of U.S.-made goods seem to be production equipment, components and control instrumentation. Call E. Lee Carteron, 202-967-2973/4.

Automotive Diagnostic and Repair Equipment Exhibition. Tehran Trade Center. Feb. 2-6. The Government of Iran has committed $140 million for expansion and modernization of vehicular production and assembly facilities between 1973 and 1978. As a result, vehicle registration is expected to exceed one million by 1978 (double the 1973 figure). Iran produces none of this equipment and relies entirely on imports. This exhibit will be the first concerted

effort to promote U.S. exports in this product category to Iran. Contact Tim Sutherland, 202-967-4652.

Metalworking Equipment Catalog Show. Seoul and Manila. February. Korea and the Philippines offer a combined market for metalworking equipment of up to $40 million. This is expected to grow with continued improvements in production and repair of transport equipment, expanded minerals production, and new construction and manufacturing activities. Overall growth rates are satisfactory in both countries, with the annual rise in GNP in 1973 above 7 percent. While Korea represents the larger market, both countries are increasing their imports of metalworking equipment. The United States has a market share of 10 percent in Korea and 20 percent in the Philippines, and this product category is considered to be one of the best sales prospects for U.S. exports to both of these countries. Call Robert E. Peterson, 202-967-3973.

Microwave Technology Exhibition. Paris Trade Center. Feb. 3-7. The French market for microwave systems and equipment, circuits, components, test and measuring instrumentation is expected to expand sharply in the next few years. Spurred by a need to update outmoded communications systems and to utilize microwave applications for various military and industrial needs, the French are expected to spend over $960 million on microwave products from 1974-1977. Call Eugene Shaw, 202-967-2177.

ACT '75—American Computer Technology 1975—Tokyo Trade Center. Feb. 3-8. The Government of Japan has announced that as of Aug. 4 it will automatically approve applications by foreigners for up to 50 percent investment in newly established companies for the manufacture, sale, or leasing of computers and computer-aided systems. By the end of 1975, 100 percent foreign ownership will be allowed, and all quantitative restrictions on importation of computers and related equipment will have been lifted. By 1977 Japan will be importing an estimated $1 billion worth of computers, peripherals, and software annually to augment its $9.7 billion annual consumption of locally-made computer products. Contact Maurice Shea, 202-967-2461.

Power Sources—Energy 75. Milan Trade Center. Feb. 8-12. The energy crisis has redirected attention toward power generation and related equipment. The Italian market for power equipment, both primary and standby, is promising for American producers as they can offer the most advanced products. The outlook for imports from U.S. suppliers looks especially good in the growing nuclear generation field. There is strong interest as well in geothermal and solar power, and other new approaches to power generation. The exhibit will be held in conjunction with INTEL 75-1st International Exhibition of Electrical Engineering. Call Carolyn Allen, 202-967-2434.

Recreational/Leisure Time Goods. U.S. Trade Center for Scandinavia in Stockholm. Feb. 10-14. U.S. manufacturers of summer and winter sports/recreation equipment, sports apparel, aircraft and aircraft equipment, boats and accessories, and other all-year-round products such as camping and physical fitness equipment now have an excellent opportunity to exhibit their latest products at "Leisure Time/U.S.A." Scandinavians now have a shorter workweek, longer vacations and more money to spend on recreational products. Household income in Sweden in 1974 is expected to rise well over 15 percent which, allowing for consumer price increases, will represent a 5.3 percent rise in real disposable income. Call William Beiring, 202-967-3276.

Automotive Diagnostic and Repair Equipment. Offsite Trade Center Show, Beirut. Feb. 10-14. Up to 15 U.S. firms will have the unusual opportunity to participate in this event in tandem with a similar Trade Center show in Tehran Feb. 2-6. The site is the Industry Institute in Beirut. As a hub of commercial and financial activity in the Middle East, regularly attracting business visitors from throughout the region, Beirut is a logical site for an exhibition designed to capitalize on the rapidly expanding market potential in such target markets as Saudi Arabia, Kuwait, the United Arab Emirates and other Gulf states, in addition to Lebanon. Contact Michel Smith, 202-967-4652.

Plastic Production Equipment. Mexico City Trade Center. Feb. 10-14. With an increase in purchases of plastics production equipment on the order of 40 percent annually over the last several years, Mexico's market for U.S. equipment in this category is excellent. Now a producer of petrochemicals, Mexico aims at future self-sufficiency in plastics feedstocks, so expansion in the industry continues. Call Peter Clary, 202-967-5040.

Materials Test Instrumentation and Equipment. Frankfurt Trade Center. Feb. 11-14. An increase in both public and private research and development activity combined with more exacting specifications imposed by industrial customers has greatly strengthened the German market for materials test instrumentation and equipment. Imports of selected testing instruments are likely to reach $68 million in 1974 of which the U.S. share is expected to be 28 percent. Call Don Schmadel, 202-967-2177.

Food Processing, Food Packaging, and Agricultural Equipment Trade Mission. Colombia, Ecuador, Jamaica, and the Dominican Republic. Feb. 14-28. These countries are making an effort to substitute domestically produced food for imports, and at the same time expand employment. The result is an increased demand for planting; harvesting; livestock; dairy; poultry; and food processing and food packaging equipment. Call Wanda Lee Ale, 202-967-4511.

Industrial Instruments. Sydney Trade Center. Feb. 17-21. The U.S. share of the Australian import market for industrial instruments is estimated at about $40 million. Most significantly, the potential for U.S. industrial instruments has improved greatly as a result of recent price advantages gained through monetary revaluation and Australian tariff cuts. Because of this new-found price competitiveness, it is expected that the U.S. market share could increase as much as 20 percent. Contact Fred Groh, 202-967-3646.

Timber Industries Equipment Trade Mission to Ivory Coast, Cameroon and Gabon. Feb. 23-March 7. Strong world demand and favorable world prices for forest products emphasize the desirability of sending this mission to these heavily forested countries. Products featured will include logging and felling equipment, log and lumber transport equipment, sawmill and woodworking machinery, and machinery for manufacturing plywood, veneer, particle board, pulp and paper. Call Edward J. Wason, 202-967-4918.

Automated Business Equipment and Systems Exhibition. U.S. Trade Center, London. Feb. 24-28. The United Kingdom imported $65.9 million worth of U.S. automated business equipment and accessories in 1973. Of 16 equipment categories, the United Kingdom was the largest import dollar earner in Western Europe for nine of them, second largest for six, and third largest for one. In an effort to increase the U.S. market share of automated business equipment that can be utilized by both users and non-users of ADP systems, Commerce will present this major commercial promotion and exhibition of latest developments in the state-of-the-art of U.S. automated business technology. Electronic calculators, copying machines, word processing typewriters and systems, in-house offset printing equipment and many more categories are being sought. Contact Ron McCowen, 202-967-4462.

Process Control Instrumentation Exhibition. U.S. Regional Trade Center, Singapore. Feb. 24-28. High sales potential exists in Singapore for established distributors, agents and representatives of U.S. manufacturers of process measuring and control instruments and systems for measuring, recording and controlling physical and chemical properties. Control and regulator valves, servo mechanisms, process control computers and related products also rank high. Fastest expanding sales opportunities are foreseen in the chemical industry in electric/electronic instrumentation. To participate in this locally-procured event, ask your Singapore representative to contact the Director of the U.S. Regional Trade Center, 1st Floor Yen San Bldg., 268 Orchard Rd., Singapore 9. (Tel. 373-100).

Technical Sales Seminar to Soviet Union, Czechoslovakia and Romania on Water Treatment and Purification. February. The Joint Committee on Cooperation in the Field of Environmental Protection has formulated four specific areas for work and improvement in the field of water treatment and purification: analysis and modeling of river basic pollution; protection and management of lakes and estuaries; effects of pollutants upon aquatic ecological systems; and prevention and treatment of waste discharges, including sewage treatment and industrial pollution. Manufacturers of products that are used in the above areas and firms with such expertise are invited to participate in this event. Participants will have the opportunity to meet Soviet and Eastern European scientists, engineers and technicians as well as key Ministry, Foreign Trade and Institute officials. A series of business appointments will be provided after the seminar sessions on an individually scheduled basis for each member. The seminar Chairman will be a well-known authority in this field. Call Wyn Coates, 202-967-5285.

Citrus Industry Equipment and Supplies Trade Mission. Spain, Italy and Greece. March 1-12. In these major citrus-producing countries there is a good sales potential for machinery used in harvesting, food processing, and storage equipment for fruit growing and processing. Call Wanda Lee Ale, 202-967-4511.

Pulp, Papermaking and Converting Equipment Exhibition. U.S. Trade Center, Paris. March 3-7. With the demand for paper skyrocketing, local manufacturers fall far short of meeting equipment needs. Furthermore, strict pollution control regulations and the ongoing modernization trend are resulting in demand for the most sophisticated process control and pollution control equipment and instrumentation. There is also much interest in waste paper processes. Call Robert B. Wallace, 202-967-3748.

Pharmaceutical Production Equipment Exhibition. Mexico City Trade Center. March 3-7. Strongly expanding Mexican Government medical care programs as well as stricter controls in production and higher quality required from local laboratories offer good opportunities to U.S. suppliers of a wide range of machinery, equipment and instrumentation used in production of pharmaceuticals. The U.S. share of total imports is about 70 percent and a majority of local needs must be imported. Call Mary R. Wiening, 202-967-5037.

"PRINT-PACK USA"—International Printing and Packaging Exhibition. Sao Paulo. March 3-9. The Brazilian market for printing and graphic arts equipment is $52 million and growing 13 percent a year, and the market for packaging machinery is $28 million and growing 27 percent, offering hot sales opportunities. Combined imports hit $63 million last year and the U.S. holds a major share (37 percent in printing, 25 percent in packaging) which should go higher in the next 3 years. Opportunities are especially good for form-fill-seal, shrink wrapping, thermoformers, vacuum and

gas packaging, can-making, cartoning, can-packing, bottle-filling, case filling and sealing, bag top labeling and code marking equipment. Web-offset and flexographic presses have excellent potential, as do phototypesetting, editing and automated photocomposition equipment. Contact Pete Field, 202-967-3871.

Electronic Data Processing and Related Equipment. U.S. Trade Center for Scandinavia in Stockholm. March 10-14. "EDP-V" is a major exhibition designed to provide American manufacturers of computers and related equipment with an excellent springboard from which to penetrate the dynamic Scandinavian market or expand their market share there. Current prospects are particularly favorable, as strong EDP sales continue to be fueled by increasing private sector realization of new profit-oriented computer applications and by increasing flexibility in leasing and other approaches to the issue of computer availability. Current projections indicate that the Swedish market alone will spend almost $1 billion on EDP equipment in the 1973-77 period. Imports are expected to continue to account for most sales, with U.S. firms and their European subsidiaries providing over 75 percent of all products. Call Jim Lamont, 202-967-4543.

General Industrial Equipment and Instrumentation Solo Exhibition. Bogota. March 10-15. The first U.S. Solo Exhibition in Colombia will provide a unique sales opportunity to U.S. manufacturers to promote their products in this important South American market. Operating from four major industrial centers which form a broad manufacturing base for such sectors as steel, chemicals and petrochemicals, food and beverages, rubber, pulp and paper, automotive, textile and non-metallic minerals, Colombian industrialists have greatly expanded and diversified non-traditional exports within the Andean Common Market and throughout the world, reaching $2.5 billion in exports in 1973 and doubling their total foreign trade in less than ten years. U.S.-based manufacturers of analytical instrumentation for better quality control, general materials handling equipment and systems, and equipment for the greatly expanding printing and graphic arts and textile industries will be joined by local agents of US. general industrial lines already being marketed in Colombia. Call Richard F. Muenzer, 202-967-2329.

U.S. Exhibition, Cairo International Fair. March 10-31. The American Embassy is sponsoring a U.S. Exhibition at the Cairo International Fair featuring a variety of products and services aimed at the Egyptian market. Apply directly to Roger Merrick, Commercial Section, American Embassy, 5 Sharia Latin America, Cairo. Limited background information is available from: Robert Vigneault, 202-967-4304, or John Haldane, 202-967-3752.

Sporting Goods (JEEP). Tehran. March 11-13. The Iranians are keenly sports-minded. Sports participated in include snow skiing, soccer, tennis, hiking, fishing and camping. With rapidly increasing per capita income and conversion to a five-day workweek, a good market potential for American sporting goods exists. Limited to new-to-market firms. Contact Frank O'Connor at the U.S. Department of Commerce District Office, 441 Stuart St., Boston, Mass. 02116, telephone 617-223-2312.

Industrial Assembly Equipment. Milan Trade Center. March 11-15. Vastly increasing labor costs are providing Italian manufacturers with the incentive to use more advanced types of assembly equipment. In addition, Italian industry, in its attempt to remain competitive with its EEC partners, the United States and Japan, is being forced to rationalize its production processes. Since Italian manufacturers produce mainly conventional types of industrial assembly equipment, the projected strong demand for high productivity machines, products and tools incorporating latest developments and know-how will be met by imports. Contact John Priamou, 202-967-2434.

Hotel and Restaurant Equipment Exhibition. March 14-18. This major promotion will be held concurrently with the 1975 Tokyo International Hotel and Restaurant Show and will attract key buyers and decision makers from all over Japan. The Japanese market for hotel and restaurant equipment in 1973 was about $3.9 billion and growing at an average annual rate of 20 percent. Imports comprised over $56 million in 1973 and are expected to rise at an average annual rate of 20 percent over the next three years. U.S. products accounted for roughly 34 percent of imports in 1973. Best sales prospects include administrative services equipment, building mechanics equipment, commercial food and services equipment, and cleaning, maintenance and sanitation equipment. Call John L. Wolf, 202-967-4056.

TAPEX '75—Antipollution Exhibition, 5th International Session. Tokyo. March 14-19. The extent to which the Japanese Government and private industry are committed to solving the nation's pollution problems is best reflected by the estimated $5.6 billion to be spent by the Japanese in this field during 1974. This expenditure represents more than 9 percent of total private plant investment in Japan. With Japan's pollution laws the most stringent in the world and its requirements increasing rapidly, U.S. suppliers, who now provide 70 percent of Japanese imports of pollution control equipment, materials and systems can expect excellent sales opportunities over the next three years. Call Ray Alvarez, 202-967-2461.

Educational and Training Equipment (JEEP). Mexico City Trade Center. March 17-19. With a population of approximately 57 million, an economy growing at a steady 7.4 percent and a school enrollment of over 10 million, improved techniques and equipment for Mexico's schools and colleges are constantly being sought. In addition, enterprises are required to provide education and training for their employees. These factors have created a favorable situation for profitable business activity. This exhibition is limited to new-to-market U.S. participants and is designed to put them in contact with potential representatives who can handle sales on a continuing basis. Call Alvin G. Davis at the Chicago District Office, 312-353-4450.

Apparel Manufacturing Equipment Exhibition. Frankfurt Trade Center. March 18-21. Inflationary factors and labor scarcity are inducing apparel manufacturers to streamline operations to reduce overhead and maintain competitive prices and output. Sales potential is high for most types of automated, labor saving or cost cutting production equipment and specialties. With easing of bank credits and interest rates, and elimination of investment taxes on capital goods, apparel makers are in position to purchase. Equipment sales are steadily climbing. An annual increase of 6.25 percent is projected through 1977 in Germany. Call Charles Whitley, 202-967-5381.

Advanced Electronic Components Exhibition. Milan Trade Center. March 22-25. Italian imports of advanced electronic components have been increasing on an average of 18 percent a year. Between 1971 and 1973 the consumption of these components climbed from $89.5 million to $135.7 million. High on the list of most-wanted components are capacitors, integrated circuits, diodes, rectifiers, transistors, resistors, thyristors, cathode ray color tubes. Call Sam Spaulding, 202-967-4508.

Pumps and Compressors Specialized Exhibition. Moscow. April 1-10. Offers an excellent opportunity to expose products to the most important buyers in the growing Soviet market area. The USSR continues to expand many areas of industry. The new five-year plan includes expansion of present and construction of new enterprises throughout the country. Implementation of these plans requires acquisition of a large volume of the most up-to-date pumps, compressors, and related items. Soviet domestic production is capable of supplying only a part of the total demand for this equipment. The Soviet economy must, therefore, rely on imports to a large extent. Call Oleg Jerschkowsky, 202-967-3376.

Chemical and Petrochemical Processing Equipment and Services Trade Mission to Venezuela, Brazil and Argentina. April 3-15. All U.S. companies providing products and services in the broad field of chemical and petrochemical production and processing equipment, instrumentation and services are invited to participate. Limited to 12 members. Call Bill Bushwaller, 202-967-4511.

U.S. Consumer Goods Promotion. Tokyo Trade Center. April 7-10 and 14-17. The first promotion will present major electrical appliances, electric and nonelectric housewares and home furnishings. The second will essentially cater to recreation, sporting and leisure items, games, toys, books, magazines, writing instruments, precious stones and jewelry, cosmetics, perfumes and athletic wear. Japan is an outstanding market in which imports of U.S. nonfood consumer goods were $401 million in 1972 and rose 13.5 percent to $455 million in 1973. Revaluation of the yen, escalating domestic and manufacturing costs, changing Japanese tastes towards western goods, and demand for a wider range of quality/brandname items are factors which are contributing to strong sales of U.S. consumer goods in Japan. Call Don Chambers, 202-967-2963.

Electronics Production and Test Equipment Tandem Exhibitions. U.S. Trade Center, Stockholm, April 7-11, U.S. Trade Center, London, April 15-18. Two consecutive exhibitions directed primarily to producers of electronic components in Sweden and the United Kingdom are now being offered to U.S. manufacturers of rolled, drawn, and extruded nonferrous metal mill shapes used in electronic component production; production equipment for semiconductor integrated circuits, printed circuits, wiring assembly and other interfacing, and passive components; test instruments and equipment for production and/or inspection of electronic components and circuits; parts and accessories for solid state semiconductor devices and passive components; and piezoelectric crystals including mounted filters and parts. Sales in Sweden of EPT equipment, estimated at more than $7 million in 1973, are projected to increase 20 percent to $14 million in 1977. In 1973 the United Kingdom imported a total value of $71.8 million of such products. Call Maurice Peter, 202-967-4256.

The International Motor Show. Barcelona. April 12-22. Commerce will sponsor a U.S. pavilion at Spain's leading annual event for the automotive industry. This "gateway to the Spanish auto market" offers U.S. manufacturers of auto service and repair equipment and supplies an excellent opportunity to display and sell their products. Plans have been established by Spanish auto manufacturers to spend $1.1 billion by 1977 for new and improved production facilities. With the subsequent increase in the motor vehicle population, there will be a tremendously increased demand for new and improved service and repair equipment. Call William S. Gaines, 202-967-3957.

Laser and Electro-Optic Technology Exhibition. U.S. Trade Center, Paris. April 14-18. Recent market research shows a splendid opportunity for U.S. manufacturers and suppliers to gain increased sales in the flourishing French market. A laser exhibition in 1969 resulted in over $3 million in sales during the

show and the following year. Since then, scientific and industrial need has grown rapidly. During 1975-1977, French industry and scientific organizations are expected to spend $39 million on lasers. Imports are expected to constitute the greater share of this market. Contact Chuck Whitley, 202-967-5381.

U.S. Book Fair. Sydney Trade Center. April 14-18. Australian imports of books and pamphlets is approximately $85 million, with annual growth of 10 percent. The U.S. provides about one-third of these imports. American products have been competitive recently with revaluation of the Australian dollar. In addition, recent breakthroughs in the restrictive markets agreement allow greater freedom and openness in Australia, especially with respect to textbooks, library/reference books, do-it-yourself books, technical journals, and all types of paperbacks. Contact Fred Groh, 202-967-3646.

Franchising Trade Mission. Tokyo, Osaka and Fukuoka, Japan. April 14-25. Japan's rapidly growing economy favors the extension of franchising activities in the categories of fast food restaurants, automobile products and services, laundry and dry-cleaning services, hotels, recreation, and retailing. Call Wanda Lee Ale, 202-967-4511.

Plant Protection Systems. Tehran. April 20-24. The market for plant protection systems in Iran is expected to grow from $3.6 million to $21 million within the next four years. Many new plants are under construction or expansion, and managers are interested in seeing new developments in plant protection methods. Phone Michel Smith, 202-967-4652.

MACH TECH—Machine Tools and Metalworking Equipment Exhibition. Taipei Trade Center. April 21-25. Taiwan's economy continues to expand at over 8 percent a year. Consumption of metalworking equipment is rising at 15 percent per year, from $38 million in 1974 to $67 million by 1978. Call Harry Stringer, 202-967-5200.

Advanced Medical Equipment Exhibition. U.S. Trade Center, Mexico City. April 21-25. The Mexican market for medical equipment is growing at twice the rate of the economy in general, and U.S. equipment is favored in most categories. Two previous similar exhibitions at the U.S. Trade Center have been extremely successful. Call Mary Weining, 202-967-5037.

Pollution Control Equipment. Frankfurt Trade Center. April 22-25. American manufacturers and suppliers of equipment for the control of air and water pollution, noise abatement, sewage treatment and solid waste disposal have an excellent opportunity to display and sell their products in the lucrative German market. In 1974 and 1975, the Federal Republic's annual investment in pollution abatement is anticipated to amount to about $2.6 billion and $3.1 billion, respectively. Call Bill Dawson, 202-967-4941.

Process Control Instrumentation Exhibition. Manila. April 22-26. High sales potential exists in the Philippines for U.S. manufacturers of process measuring and control instruments and systems for measuring, recording, and controlling physical/chemical properties. Total consumption of such instrumentation rose from $1.7 million in 1970 to $2.4 million in 1973, a jump of nearly 30 percent. Consumption is expected to more than double between 1974 and 1978. The first solo commercial exhibition ever sponsored by the U.S. Department of Commerce in the Philippines is designed to afford firms maximum market penetration with a minimum expenditure of money, effort, and time. Call Dave Horridge, 202-967-2798 or 5545.

U.S. Exhibition, Casablanca International Fair. April 24-May 11. A U.S. exhibition sponsored by the American Embassy will feature a variety of products and services aimed at the Moroccan market. Apply directly to: Joseph Fisher, Commercial Section, American Consulate General, B.P. 675, No. 8, Bd. Moulay Youssef, Casablanca. Limited background information is available from Robert Vigneault, 202-967-4304, or Laron Jenson, 202-967-5737.

Sales opportunities in 16 U.S. commercial exhibitions, 4 catalog exhibitions, 38 shows at U.S. Trade Centers, 7 trade missions and 2 technical sales seminars are being offered to present and potential U.S. exporters between now and May.

Each Trade Center exhibition is limited to one particular line of products and centers are located in Beirut, Buenos Aires, Frankfurt, London, Mexico City, Milan, Paris, Seoul, Singapore, Stockholm, Sydney, Taipei, Tehran, and Tokyo. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, **write:** *Director, Office of International Marketing, Room 4015, U.S. Department of Commerce, Washington, D.C. 20230.*

U.S. specialized trade missions and technical seminars are comprised of groups of U.S. businessmen organized by the U.S. Department of Commerce to travel abroad to promote the export of U.S. goods and services produced by their particular industry. **Write:** *Trade Missions, Room 4219, U.S. Department of Commerce, Washington, D.C. 20230.*

Hospital/Medical Equipment (JEEP). U.S. Trade Center. Sydney. May 5-7. The medical equipment industry is one of the fastest growing markets for U.S. firms. Increased government spending in addition to monetary revaluations make U.S. products very competitive, and most of Australia's requirements must be met by imports. Limited to new-to-market U.S. firms and designed to put them in contact with potential representatives who can handle sales on a continuing basis. Call Fred Groh, 202-967-3646.

Portable Power Tools (JEEP). Tehran. May 12-14. There is a $10 million market for pneumatic power and hand tools in Iran. The market is expanding dramatically as Iran uses more of its vast oil revenues to build new factories and houses for industrial workers and the burgeoning middle class. Limited to new to market firms. Phone Michel Smith, 202-967-4652.

Children's Fashions (JEEP). U.S. Trade Center, Paris. May 13-15. In spite of an active French garment industry, the market in France offers splendid opportunities for many American manufacturers of children's clothing. Sales prospects for U.S. sportswear are likely to get better as youth-led trends towards casual clothing continues. Interest is especially strong for styles that project the American look. This promotion is a convenient first step in developing sales in France. Contact nearest Commerce District Office or Anita Brownstein, 202-967-4504.

Toys and Games (JEEP). U.S. Trade Center, Paris. May 13-15. An increased affluence and a generous attitued towards youth are factors which account for a surge in the market in France for toys and games. In 1973 the French spent over $323 million for children's playthings and this upward trend will continue as parents buy more toys for their children not only once or twice a year but on a recurrent basis. This promotion is a convenient first step for American manufacturers of toys or games to develop sales in a lucrative market. Contact nearest Commerce District Office or Anita Brownstein, 202-967-4504.

Airconditioning and Refrigeration Equipment Exhibition. Frankfurt Trade Center. May 13-16. This event will feature airconditioning and refrigeration equipment for the commercial, industrial and residential markets. The U.S. is still considered slightly ahead of the German technology in solving difficult airconditioning problems. The current German airconditioning equipment market is estimated at about $301 million, of which about 22.5 percent or $68 million is manufactured in the U.S. By 1976 the market for this type of equipment is expected to be about $458 million, of which $91.7 million will come from the U.S. The refrigeration market is expected to increase from 5-8 percent annually. Call Don Schmadel, 202-967-2177.

Technology 75—Tel Aviv International Fair. May 20-27. Show for machine tools, metalworking, metal finishing equipment and computers will be sponsored by Commerce at the U.S. Pavilion of this Fair, a "business only" event designed to attract the largest possible number of businessmen, professionals, top executives and company representatives from Israel and other countries. Participation is limited and industry interest is high. Call Tim Sutherland, 202-967-5506.

Printing and Graphic Arts Equipment. U.S. Trade Center, Sydney. May 20-30. U.S. exports to Australia have been increasing at a rate of 70 percent above last year due to a booming economy, revaluation of the Australian dollar and the currencies of other major exporters to Australia, reduction in Australian tariffs, a high rate of inflation, and shortages for many types of products. The market for printing equipment in Australia is about $40 million this year, 80 percent of which is imported mainly from Germany, the United Kingdom, and the United States. The U.S. share of this market has fluctuated at between 20 and 30 percent and could be expanded. Contact Fred Groh, 202-967-3646.

U.S. Advanced Business Equipment Exhibition, Budapest International Spring Fair. May 21-29. Hungarian officials have expressed high interest in advance business equipment geared to mechanize and modernize office systems and administrative procedures. Principal equipment in demand includes: electronic calculators, accounting machines, microfilm systems, advanced model cash registers, copy and duplicating equipment, and other general office equipment such as collecting and laminating machines and sophisticated filing systems. Call Kenneth McKenna, 202-967-5186.

U.S. Pavilion, Paris Air Show, Le Bourget Airport. May 30-June 8. The export market is the brightest spot in the U.S. aerospace industry this year. In 1973 U.S. aerospace exports reached an all-time high of $5.2 billion, 27 percent of production. During the period 1968-1973, over 46 percent ($8.2 billion) of total U.S. exports ($17.7 billion) of civilian and military aircraft, engines and parts were shipped to Western Europe. Sales prospects for 1975 are particularly good for general aviation aircraft, helicopters, military aircraft for the NATO air forces, avionics and airborne instrumentation, aircraft engines and parts, airport and ground support equipment (with special attention on security equipment), and components. Increasingly fierce European competition makes it more necessary than ever for U.S. aerospace companies to see and to be seen at the 1975 Paris Air Show, not only to increase sales, but to maintain our traditionally high export market share. Call Michael G. Hanpeter, 202-967-4961.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product n u m b e r taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Foreign Investment Services Staff, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

SWITZERLAND—The country's largest chain of newsstands is interested in licensing, representation, joint venture and franchising arrangements with U.S. producers of **consumer products and services.** Fields of interest include: Toys; educational games; sporting goods; do-it-yourself articles; small housewares; novelties; leisure articles; fitness and health products, including food products; recreational and educational services; fast food outlets; dietetic food and weightwatcher chains; computerized matchmaking and other consumer services; health programs and travel services. Company is also interested in foreign direct investment in the United States in form of takeovers or joint ventures to acquire know-how in aforementioned areas for transfer to Switzerland and Europe. Established in 1872, firm owns 1,000 retail outlets in form of newsstands and stores comparable to small drugstores. Annual sales of company are approximately $300 million; it has 2,500 employees. Walter Stohler, New Projects Manager, Schmidt-Agence AG, Sevogelstrasse 34, 4002 Basel, Switzerland. P-74609.

1061—GREECE—Representative seeks contacts interested in purchase, lease or joint venture for exploration of **lateritic iron nickel ore** surface deposits northwest of Thessaloniki in two separate concessions totaling 4,625 acres. According to chemical analysis, specifications are 1 to 1.4 percent NI, 35 to 43 percent FE, 20 percent SI02, 0.05 percent CO, Max 5 PPM AS. Offers possibility of link-up with neighboring Yugoslavian deposits. Dr. George Georgiadis, Mining Engineer, 77 Mitropoleos St., Thessaloniki, Greece. Telephone — (031) 224133. WTDR. P-74596. OPIC.

2023—MEXICO — Dairy products manufacturer is seeking an American joint venture partner to expand its operations. Company wants to expand its production of **powdered milk** by introducing larger, more modern dehydrating machinery. In seasons when milk is scarce, firm hopes to diversify into dehydration of citrus fruits and possibly vegetables and eggs. U.S. partner would be offered a 49 percent interest in the business. Initial investment would be at least $125,000 for plant and equipment. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-74597.

2099—INDIA—U.S. equity, know-how and equipment are sought to produce **instant tea from black leaves.** Production capacity to the facility would be 400 tons annually. Plant will be in Coonoor, Tamil Nadu State. Output is to be exported. Established in 1947, firm produces 1 million kilograms a year of finished green and black tea under licensing agreement with a Swiss company. It employs 50 workers and has annual sales of about $800,000. J. V. Chandrasekhara, "Girija," Woodcote Estate, Coonoor 2, India. WTDR. P-74615. OPIC.

2099—NORWAY—A leading food processing firm is interested in obtaining licenses for **all types of snack foods incorporating proprietary technology, such as vacuum-packed "stack chips."** Company was founded in 1936, employs 1,150, and has annual sales volume of about $52 million. Products currently produced are preserved and frozen meat products, canned and frozen products, canned vegetables, desserts, crisp bread and cake mixes. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74598.

2661, 3079, 2499, 3221—SWITZERLAND—Large manufacturer of wide range of floor products seeks licensing arrangement and/or European distributorship of **wall and ceiling products.** Firm is Europe's major manufacturer of cushion vinyl floorings and linoleum which account for 70 percent of total sales of $180 million. Has factories in Benelux countries, France, Sweden, Switzerland and Austria. Total labor force of 3,800. Representative of firm intends to visit U.S. commencing Nov. 11 for 2 to 3 weeks to pursue interesting distributorships and licensing proposals. Jan Prising, Manager Diversification, Forbo Betriebs AG, Faerberstrasse 6, CH-8008 Zurich, Switzerland. P-74599.

3211—DENMARK—Firm seeks supplier of second-hand plant equipment for manufacture of **sheet glass** in Kenya. Company may consider direct purchase, but would prefer to establish connection with firm that can also supply technical know-how and possibly be interested in joint venture operation. Frm is one of a group of companies engaged in development and supply of industrial plants and equipment, rendering of professional engineering and project management services, and arranging of financing and credit facilities. Area of operation is mainly Africa. Activities of the group of companies are supported by well-known European firms on basis of contractual arrangements. Interested parties should communicate directly with Harry Blunck, Project Director, Engineers International Corp. (Denmark) A/S, 124/126 Strandvejen, DK-2900 Hellerup-Copenhagen, Denmark. P-74600.

3452—LIBERIA—Large concern engaged in building construction and manufacture of floor tiles, marble and nails seeks a three-way joint venture to establish nail factory in Ivory Coast near Port of San Pedro. Proposed factory would manufacture all kinds of **nails, bolts, screws and fencing (mesh) wire.** Firm reportedly has Government of Ivory Coast concession which includes ten year duty-free import of machines and materials, and no tax privileges. Initial investment from U.S. partner would be $250,000 which would acquire one-third interest in the new company. Equipment to initially produce one ton per hour of common nails on a 24-hour basis will have to be acquired as soon as possible. Company would like to start discussions immediately. Interested parties should contact Nohad J. Gemayel, Vice President, Monrovia Construction Corp., P.O. Box 56, Monrovia, Liberia. Telephone 21415. WTDR. P-74601, OPIC.

3494 — UNITED KINGDOM — Large public company engaged in manufacture and sale of non-ferrous metals recently acquired an engineering valve company manufacturing replaceable seat butterfly valves for use mainly in water and marine industries. Parent company intends to expand valve company's present range of products by either acquiring by license a suitable **"rubber lined" or "coated" butterfly valve,** or by acquiring by license a **range of bull valves.** These products would be marketed primarily to oil and petrochemical markets in U.K. and Europe and as such would have to conform to A.P.I. specifications or an alternatively acceptable ore industry standard. Representatives from firm expect to be in United States soon, prepared to discuss proposal with interested U.S. firms. S. I. Macphie, Business Development Manager, Delta Metal Co. Ltd., Rod Division, Delta Works, Dartmouth St., Birmingham B7 4AJ, England. P-74614.

3496—JAMAICA—Seeks joint venture partner experienced in **wire and welded wire fabric manufacture.** Firm desires U.S. partner to invest obsolete labor-intensive wire manufacuring machinery as an alternative to selling or writing it off as used equipment. Seeks following equipment, in order of priority: (I) Wire drawing equipment: three wire drawers (one 4-hole, one 8-hole, one 14-hole); butt welders and pointers. (II) Annealing equipment: One annealer bell-type oven used to heat treat wire; operates on inert gas or crude oil fire, has own atmosphere (prefers inert gas system); capacity should be 3,000-4,000 lb. per load. (III) One multiple welder, capacity approximately 200 tons per month. Partner sought should have technological expertise, market research capability to readily forecast volume and market potential, and access to markets outside of Jamaica. In return for machinery and technical counsel, Jamaican company is prepared to grant a negotiable share in the company equity and an estimated 8-14 percent anual return on the partner's investment. For further details, contact Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-74602. OPIC.

3500—UNITED KINGDOM—Leading manufacturer of **heavy handling equipment,** especially for the steel industry, seeks licensing arrangement covering manufacture and marketing of compatible products. In materials handling field, firm prefers fabrication work up to 10 tons weight with additional machinery and fitting requirements to produce complete assembled products, 1 ton to 20 tons in weight. Presently produces automatic lifting tongs, timber grabs and sheet lifters. Employs 96; annual sales $1 million. For additional information write: R. G. Tench, Managing Director, Walter Somers (Materials Handling) Ltd., New Road, Netherton, Dudley, England. P-74603.

3552—UNITED KINGDOM—Seeks license or joint venture to manufacture **electronically controlled automated textile equipment.** Also interested in production of **related electronic devices, process control machinery.** Presently, firm distributes throughout Europe mechanical, electrical and electronic components and process control equipment, primarily for textile industry. Company has extensive service facilities. H. W. Lessing, Director, Meiners Optical Devices Ltd., 25/35 City Road, London E.C.1.,

England. Telephone, 01-606-2272; telex, 888657; telegrams, LESSOPEX, London ECI. P-74604.

3560—JAPAN—A major producer of plastic film seeks the latest U.S. technology in **packaging machinery field.** Firm wants to make two types of packaging machines; one utilizing thermal shrinkage of plastic film, the other using innate stretch of plastic film. Machines would be used in tight packaging of commodities. Company operates 8 plants and 24 sales offices in Japan. It also has offices, subsidiaries and affiliates in the United States, Europe, Latin America and Southeast Asia. Firm reported 1973 sales of more than $1.4 billion. Tsuneo Tanaka, Director, Kyoto Detached Office, Technical Development Department, Sekisui Chemical Co., Ltd., 2-2 Kamichoshi-machi, Kamitoba, Minami ku, Kyoto 601, Japan. Phone, Kyoto (075) 681-8511; cable, SEKISUI OSAKA; telex, 0523-6943. P-74605.

3585—FRANCE—Manufacturer of boiler shop and structural steel items seeks licensing arrangement for manufacture of industrial and/or domestic **heating systems** using solar heating **energy.** Annual sales, about $6 million. J. Moysich, Manager, Chaudronnerie et Forges d'Alsace, 67250 Soultz-sous-Forets, France. P-74606.

3589—SWITZERLAND—Seeks license or joint venture to manufacture **water pollution control equipment, machinery for treatment of cutting oils and industrial coolants and air pollution control systems; industrial filtration equipment; and machine tools and engineering equipment.** The Swiss group of firms maintains subsidiaries in Switzerland, United Kingdom, and France. Presently produces and markets metalworking machines, dust collectors, filters, tools and industrial vacuum cleaners. Operators sales network in Europe, Australia, and Japan. G. Zwicky, President, Zwicky Machines, Chemin De Verey 10, P.O. Box 1211 Geneva, Grange-Canal, Switzerland. Cable: GEEZWICKY: telex, 22856; telephone, 022/36 69 50. P-74607.

3600 — UNITED KINGDOM — Seeks licenses to manufacture **electric coils, transformers, motors and instrumentation.** Firm is engaged in rewinding and repair of electric motors; distribution of electric hand hools, new motors and abrasive products. Is affiliated with a major industrial group. W. R. Grant, General Manager, Globelite Industries Ltd., 1 Marsh Green Road, Marsh Barton, Exeter, Devon, England. WTDR. P-74610.

3643—INDIA—Seeks license to produce transmission line **hardware, tools and accessories.** Firm also wants to produce **preformed armor rods.** Indian Investment Centre, 708 Third Ave., New York 10017. P-74608. OPIC.

3800 — SWITZERLAND — Manufacturer of quality watches seeks to diversify its operations. Desires to produce under license or as a subcontractor U.S. **medical, precision, measuring or environmental control instruments, electronic gear, micro-mechanical parts, meters, counters, tools, small machines and parts.** Presently produces 2,000 watches per day; employs 250. For further information, write Henri Aubry, New Projects Manager, Societe Mecanique Esperus SA, 2726 Saignelegier, Switzerland. P-74612.

3842 — CHILE — Producer of **leather safety gloves** seeks license and machinery to become efficient enough to compete in Andean market. Also desires technical assistance. Presently manufactures 40,000 pairs of gloves monthly. Interested firms should contact Fernando Mardones G., Manufacturas Chileans De Guantes De Seguridad. Amanategui 425, Of. 62, Santiago, Chile. P-74613.

4231 — THAILAND — Seeks to establish a **motor freight terminal** on Southern outskirts of Bangkok. Proposed terminal will feature loading and unloading facilities, warehouses, gas station, automotive servicing garage, bank facilities, small hotels and shopping centers. Concessionnaire, after signing contract, will have to purchase approximately 60 acres of land within 30 days and commence construction of contracted facilities. Concessionnaire is entitled to reap revenue from facilities for period of 17 years from date of signing contract. Interested investors are urged to submit their proposals as soon as possible. Contact Chaleo Suwankitti, Deputy Director, Express Transportation Organization, Sri Ayubhya Road, Bangkok, Thailand. P-74611. OPIC.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

AUSTRIA—A license for manufacture in the United States of a newly developed and patented product, floating jetty units, is being offered by an Austrian firm. These units are made from high-molecular weight polyethylene capable of withstanding heavy loads and extreme weather conditions. In addition to floating jetties, small pontoons and similar structures for swimming, boating, and fishing can be assembled. An American firm in the field of plastic blow molding would be ideal for producing and marketing these units. **File 2626**

UNITED KINGDOM—A British manufacturer of control systems for aircraft simulation, industrial processes, marine craft, and automatic welding seeks an American licensee to produce such systems. Joint venture possibilities also will be considered. **File 2627**

UNITED KINGDOM—An American manufacturer of electronic timing or similar devices is being sought as a licensee by a British producer of cameras and aeronautical and engineering instruments. Prospects for joint venture arrangement also will be explored. **File 2628**

UNITED KINGDOM—A British firm specializing in designing and manufacturing radio towers, masts, and allied structures seeks a U.S. licensee or joint venture partner engaged in similar work. British company is well established as a supplier for its government's agencies and armed forces, and for police authorities and public utilities. **File 2629**

Australian Brochure Details Investing in Queensland

U.S. firms interested in investment in Australia may wish to review a new brochure entitled "Discover Your Future With Investment Queensland." Prepared by the Department of Commercial and Industrial Development, the publication describes Queensland's investment climate, natural wealth, infrastructure facilities and industrial opportunities.

A key section of the brochure reviews the services offered prospective investors by the Department of Commercial and Industrial Development. The Department encourages industrial investment in the State, undertakes research and market surveys, administers industrial estates and provides financial incentives to industry. It provides a wide range of economic services to existing and prospective industries. For further information, contact: Director, Department of Commercial and Industrial Development, Brisbane, Queensland, Australia 4000. P-74577.

Philippines Offers Incentives For Tourist Industry Investors

To stimulate construction of new hotels for the tourist trade, the Philippine Government is offering a greatly liberalized and comprehensive investment incentive scheme under Presidential Decree No. 535 of August 11. The new incentives are available to Philippine-owned enterprises, or those controlled by Philippines to the extent of 60 percent, whose ratio of foreign exchange earnings to total earnings in the year during which the incentives are granted is at least 50 percent. The decree is designed to attract foreign investors and foreign financing in tourist facilities.

Information on the new incentives and the Philippine tourist industry in general are available from the Foreign Investment Services Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74594. OPIC.

State Of Jalisco, Mexico, Welcomes Foreign Investment

The Mexican State of Jalisco has prepared, in English, a prospectus directed toward potential non-Mexican investors. The brochure, "Jalisco-State In Promotion," discusses the advantages of investing in the State (for example, absence of labor problems, cooperation between public and private sectors), and lists exportable products and seven major industries seeking foreign investment—steel, aluminum, textile, automotive machinery, precision apparatus, electronics, and chemical products.

To obtain a copy, write: Alfsonso DAU Dau, Director, or Francisco A. Narvaez, Assistant Director, Department of Economics, Unidad Administrativa Estatal, Av. Alcalde 1351, Guadalajara, Jalisco, Mexico. P-74595.

Indian Firm Needs Know-How For Reformer Tubes, Castings

Tata Economic Consultancy Services (TECS), Orient House, Mangalore St., Bombay 400 038, a leading consultant firm owned by India's largest business complex, Tatas, is interested in locating an American participant to provide technical know-how in the manufacture of reformer tubes and alloy steel castings on behalf of its client. TECS is a large business organization dealing with several prominent Indian and foreign firms, as well as international organizations. Its client is a firm located in West Bengal. Interested U.S. firms should send replies to V. S. Bhave, c/o Indian Investment Centre, 708 Third Ave., New York, N.Y. 10017.

New Egyptian Law Authorizes Private Sector Representatives

Private sector Egyptians may be appointed as representatives or commercial agents of foreign firms for the first time since 1961. The principal-agent relationship shall be governed by a forthcoming presidential decree which will implement rules for the agent-representative profession together with needed regulations for the passing of already existing representations from the public to the private sector.

U.S. exporters contemplating commercial representation in Egypt with State trading organizations may therefore find it advisable to postpone making any definite commitments for the appointment of commercial representatives in Egypt until the expected implementing decree and regulations of this Law No. 93 are available and in effect.

Foreign Trade Inquiries

These trade opportunities are based on reports received from the U.S. Foreign Service by the Trade Opportunities Division, Room 1322, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Horticultural specialties

01810 — AUSTRALIA — Florist seeking U.S. exporters of dried flowers, particularly those of Hawaii. Good opportunity exists to develop business on continuing basis. Prices requested. Reply to: June I. Medcalf, T/A Florist Services, 30 Nelson St., Gordon, N.S.W. Australia 2072.

Chemical and fertilizer mineral mining

1477XXX—PERU — 20,000 m/t Intl. quality sulfur, refined & granulated, with 0.1% of bitumen & free of arsenic, selenium, & tellurium. Sulfur is to be shipped in bulk. F.O.B. quotation ASAP requested. Firm is long established & well known customs broker, also imports merchandise for resale to special private and government customers. It has sound financial position. Contact buyer: Ing. Renee Cespedes, Agencia de Aduanas Renee Cespedes, Constitucion 292, Callao 1. Tel. 29-1283.

Heavy construction, except highway and street construction

• **16200—COLUMBIA**—Bid for construction and installation of a 44 KV. transmission line between Rio Negro and Nuevo Penol (Licitacion 4/74). This is an expansion project of the Empresas Publicas de Medellin, partly financed by the Inter-American Development Bank. Bid deadline Nov. 4. Specifications available for $19 (not refundable) from the Division de Montajes, Empresas Publicas de Medellin, Edificio Miguel de Aguinaga, Medellin, Colombia.

• **16230—IRAQ**—Bid for unified water scheme to supply treated water to 44 villages by means of pipe distribution systems which will be connected to main elevated service tanks. Work consists of manufacture, conveyance, construction, erection and testing of villages water works. Bid deadline Nov. 10. Contact: Directorate General of Water and Electricity Projects, Ministry of Municipalities, Baghdad. Specifications, general conditions and drawings available in Room 2119, Water Resources and Engineering Services, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-4346.

Men's, youths', boys' suits, coats, overcoats

23100—LIBYA—Government of the Libyan Arab Republic requests Air Force uniforms (pilots' suits, coveralls, shirts, trousers and boots, etc.) for immediate supply. Specifications can be requested from the National Trade and Industrial Co., P.O. Box 300, Tripoli.

Logging camps, logging contractors

• **24110—MOROCCO**—The Office of National Des Chemins De Fer (ONCF) requests bids for 32,200 railway crossties, neither edged nor drilled, 2.6 meters long, 0.24 meters wide, 0.14 meters thick. Lumber (14,675 pieces) of various sizes and types. Both the ties and lumber to be of oak or Azobe. However, offers for alternative types of wood with similar characteristics may be considered. Bids must include prices for plain (not creosoted) wood and for some wood creosoted according to the ruping process. Original delivery projected for 3 years (1976-78). However, ONCF prepared to accept delivery of total quantity at once. Bid deadline Oct. 31. ONCF interested in getting offers for basic prices and details would then be discussed with lowest bidders. Specifications available from Department of Commerce, Construction and Forest Products Division, Washington, D.C. 20230, ★ 202-967-2606, or from: Monsieur Le Chef Du Service Administratif, Division Des Approvisionnements, 2, Rue Halab, Rabat. Correspondence to Rabat preferred in French.

Drugs

• **28340 — MALTA** — Supply of vitamins. Tender No. 891, bid deadline Nov. 7. The accountant General and Director of Contracts, The Treasury, Floriana, Malta. When received, specifications available in English from the Materials Division, Bureau of Domestic Commerce, Room 2126, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-3910.

• **28340—MALTA** — Supply of pharmaceuticals. Tender No. 871, bid deadline Oct. 31. The Accountant General or Director of Contracts, The Treasury, Beltissebh, Floriana, Malta. When received, specifications available in English from the Materials Division, Bureau of Domestic Commerce, Room 2126, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-3910.

Steel mill products

• **33100—IRAN**—2,750 mt 4-hole fish plates type U-80 for heavy duty rail; 2,750 m/t 6-hole fish plates type U-80 for heavy duty rail. Tender No. 1117/53; bid deadline Dec. 3. Iranian State Railways, Tehran. Tender documents available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2438.

• **33100—COLOMBIA** — Various sizes and quantities of steel tubing for expansion of water conduction system of city of Medellin. Tender No. 12/9/74; bid deadline Oct. 31. Empresas Publicas de Medellin, Division Comercial, Section de Importaciones, Edificio Miguel de Aguinaga Oficina 607, Medellin, Colombia. Specifications available at above address at 1,000 pesos.

• **33100—PHILIPPINES**—Supply of reinforcing steel bars and wire, for use in power plant project; to be financed by loan from IBRD. Bid deadline Nov. 8. National Power Corporation, 161 Bonifacio Dr., Port Area, Manila. Specifications available at $1.60 per set.

• **33100—ST. KITTS, WEST INDIES**—Supply of structural steel for a 6,000 sq. ft. industrial building. Bid deadline Oct. 26. Development and Finance Corporation, 7 Church St., Basseterre, St. Kitts, West Indies. Tender documents available at $12.50.

Metalworking equipment

• **3541/42—ROMANIA** — MASINEXPORT-IMPORT, a government foreign trade organization, requests bid offers and descriptive literature for 1 automatic machine for fabricating spiral augers from 8 to 13 millimeters in diameter, total length 214 mm, with bit length of 140 mm., Dossier Number 162423/51307, and also for equipment to manufacture nails, Dossier number 162423/335F. Interested firms are asked to quote Dossier Number on all correspondence, and reply to Bela Fuchs, Import Officer, MASINEXPORTIMPORT, Str. Matei Millo 7, Bucharest, Romania. Telex numbers are 011-206 and 011-216. More detailed specifications may be obtained from Deboorne Piggot, Trade Development Assistance Division, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-3352.

Special industry machinery

35510 — SAUDI ARABIA — Saeed Saleh Baeshan, Commercial and Industrial Services Co., P.O. Box 3468, Riyadh, seeks to buy a complete tanning plant to manufacture semi-tanned chrome sole leather in Dammam. Firm is interested in direct purchase but only in conjunction with a technical advisory contract to provide know-how to operate the plant. Further detail and assistance available from Don Stow, U.S. Dept. of Commerce, Action Group for the Near East, 202-967-3993.

355402—INDONESIA — Pulp making machinery for long fiber wood. Firm now constructing a mill for mfg. cigarette paper, expected to be in operation by end of 1974. Machinery to be installed has been purchased from Japan. In initial stages firm is to import pulp from Japan, but plans to construct pulp mill of its own and is interested in U.S. pulp making machinery. Will be 1st of its kind in Indonesia, & will supply many of cigarette factories in Indonesia with cigarette paper. Cable—Carlos Pithoy, Director, P. T. Delta Paper Mill, JL. Yos Sudarso 1, Tel. 22100.

Office, computing, accounting machines

• **35700—SINGAPORE**—The Government of

Singapore, University of Singapore Development Unit, has issued a tender calling for the supply, installation and maintenance of a general purpose computer system for the new Kent Ridge Campus. No bid deadline quoted. Interested U.S. manufacturers of computer systems (not computer components) from a member country of the World Bank or their official agents must complete and submit a registration form which may be obtained from the Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

Service industry machinery

35891, 35851—BULGARIA — A number of tourist facilities are being planned, for which the Bulgarians are seeking to acquire the most up-to-date food processing systems. The Bulgarians wish to establish contact with suppliers of kitchen equipment for use in hotels, restaurants, cafes, bars and snack shops. Interested companies should forward literature to Mrs. Nadezhda Marinova of the Scientific Center of the Committee for Recreation and Tourism, Sofia, Bulgaria.

Electrical industrial apparatus

• **36200—INDIA**—Mig and cord wire welding set with stepless slope control rectifier. Tender No. 108/18/151/3-5-74, bid deadline Nov. 30. Directorate General of Supplies and Disposals. Jeevan Tara Bldg., Parliament St., New Delhi 11001. Tender copies available from India Supply Mission, 2536 Mass. Ave. NW., Washington, D.C. for $1.50 per copy.

Electrical lighting, wiring equipment

• **36400—ECUADOR** — The Secretario Del Comite Dee Licitaciones, Quito, Ecuador, has issued Tender No. 111 for outdoor lighting equipment for the Quito and Guayaquil airports. Bid deadline Nov. 13. Copies of tender announcement and specifications available from the Direccion General de Aviacion Civil Calle Piedrahita, 359 Y Ponce, Quito. Bid documents available for $80. Bids must be in Spanish and delivered in person to the Secretario Del Comite Dee Licitaciones, Quito.

Communications equipment

• **36600—GREECE**—The Civil Aviation Authority, 1 Vasileos Georgiou St., Ellinikon, Athens, has issued tender No. EX 15/74 for a supply of an FM-Link Assembly. Bid deadline Nov. 11. Copies of tender announcement and specifications available from above address or on short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

• **36600—GREECE**—The Hellenic Civil Aviation Authority, 1 Vasileos Georgiou St., Ellinikon, Athens, has issued tender No. EX 13/74 for HF, UHF and VHF transmitting and receiving equipment. Bid deadline Nov. 12. Copies of tender announcement and specifications available from the above address or on short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

• **36610—COLOMBIA** — Doctora Miriam Varela de Wagner, Sub-Gerente Administrativa, Empresas Departamentales de Antioquia, Apartado Aereo 710, Medellin, Colombia, has issued a tender for 10 telephone call timing devices. This is a trial purchase with prospect for future purchases for up to 120 units.

• **36610—IRELAND** — The Department of Posts and Telegraphs, Contracts Section, Marlborough St., Dublin 1, has issued tender No. 2ML/74 for supply, installation and testing of 30 circuit pulse code modulation systems. Bid deadline Dec. 4. Copies of tender announcement and specifications available from the Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

• **36620—AUSTRALIA** — Avec Systems, 27 Baildon St., Kangaroo Point, Brisbane, Queensland 4169, seeks car phones, radar equipment, video tape recorders, vidicons and monitors. Interested firms should forward information brochures and price lists for above producers to K. Anthony Muir-McCarey, Marketing Manager, at the above address.

• **36620—INDIA** — The Director, Railway Stores, Ministry of Railways, (Railway Board), Rail Bhawan, New Delhi, has issued tender No. Sig 102 of 1974 for driver's alertness alarm and safety control devices for fitment on diesel and electric locomotives. Bid deadline Nov. 4. Copies of tender announcement and specifications available from India Supply Mission, 2536 Mass. Ave., NW., Washington, D.C. 20008, for $6.87 per set, or on short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

• **36620—TURKEY** — Trt Kurumu Genel Mudurlugu (Turkish Radio and Television Administration) Genel Evrak Mudurlugu, Yenisehir, Ankara, has issued a tender for television studio equipment, consisting of cameras, control consoles, monitors, film scanners, recorders, microphones and speakers. Bid deadline Nov. 20. Copies of tender announcement and specifications are available from Modern Translation Bureau, Karanfil Sokak, 49/2, Yenisehir, Ankara, for $50 per set or on short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

Electrical machinery, equip., supplies

• **36900—MALTA**—The Accountant General and Director of Contracts, Treasury, Floriana, Malta, has issued Tender No. 879 for one automatic processing unit for X-ray films and one mobile diagnostic X-ray unit for bedside and operating theater use. Bid deadline Oct. 31. Copies of tender announcement and specifications available from the Treasury, Floriana, Malta, or on a short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230. ★ 202-967-2939.

• **369926/9—POLAND** — METALEXPORT, a government foreign trade organization, is seeking interested companies to supply and supervise installation of heating equipment under stairs, roof gutters and doormats in the central Warsaw railroad station. Total heating/melting surface is approximately 1000m2, and technical drawings can be supplied to interested companies. System is to be installed by spring 1975. Steam radiator or water circulation type heaters are not of interest. Firms should contact METALEXPORT, Mokotowska 44, 00-543 Warsaw, Poland. Telex: 814241 MEX PL.

Railroad equipment

• **37400—IRAN**—Supply of 600 track jacks, 5 ton capacity. Bid deadline Dec. 4. Tender no. 1131/53. Iranian State Railways, Tehran. Tender documents available from Iranian Economic Mission, 5530 Wisconsin Ave., NW., Washington, D.C. 20015, telephone 301-654-7930. Reference number is 731-36.

Instruments for meas., analysis, control

• **38200—INDIA** — The Director General, Posts & Telegraphs, Parliament St., New Delhi 10001, has issued tender No. 12-113/74-MMD for instruments for microwave integrated circuit laboratory. Bid deadline Nov. 20. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce ★ 202-967-2939.

• **38200—IRAN**—The Iranian State Railways, Tehran, has issued tender No. 1133/52 for track measuring gauge (200 pcs.). Bid deadline Nov. 18. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce ★ 202-967-2939.

Surgical, medical, dental instruments

• **38400 — MALTA** — The Department of Health, Valetta, Malta, has issued tender No. 880 for dental equipment. Bid deadline Oct. 31. Bid should offer dental chair, mobile dental unit, compressor, suction unit and mobile X-ray machine. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce ★ 202-967-2939.

• **38400 — MALTA** — The Department of Health, Valetta, Malta, has issued tender No. 879 for Xray equipment. Bid deadline Oct. 31. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science and Electronics Div., BDC-466, Room 1001, U.S. Department of Commerce ★ 202-967-2939.

Watches, clocks, parts

• **38700—INDIA** — The Director General, Posts & Telegraphs, Parliament St., New Delhi 110001, has issued tender No. 12-11/74-MMD for 5 time speaking clocks (bilingual). Bid deadline Dec. 16. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, ★ 202-967-2939.

Miscellaneous durable goods

50930XX—JAPAN—Aluminum scrap & dross for re-refining aluminum. Wishes to have prices with quality samples. Reply to—Mr. I. Kaga, Chief of Trading Dept., Tamayama Tsusho & Co., Ltd., Nisshin Bldg., 8 Hijie-cho 2-Chome Nakamura-ku, Nagoya 450. Cable Okusanco Nagoya; tel. 052-582-0856.

Building materials factory

9910501 — POLAND — POLIMEX-CEKOP, a government trade enterprise, seeks construction, supervision, know-how, technology and equipment for a polyurethane window producing plant, needed as a result of largely increased building plans. Interested firms should reply to Andrzej Karwacki, Engineer, Research Center for the Woodwork Industry, Laskowa St., Wolomin, Poland. Telex number is 762011.

Stockholm Sets Franchising Show

The U.S. Trade Center for Scandinavia in Stockholm will co-host, with the Modern Merchandising Methods Associations of Sweden, Norway, Finland and Denmark, a series of seminar presentations of franchising in the Scandinavian market Nov. 12-14. U.S. franchisors interested in participating are advised to contact via air mail or cable: Richard N. Kirby, Director, U.S. Trade Center for Scandinavia, P.O. Box 630, S-101 28 Stockholm 1, Sweden. Cable Address: U.S. Tracent Stockholm, Telephone 08/ 24 84 20.

Poland Wants To Buy Beam Plants

The Polish foreign trade organization POLIMEX-CEKOP would like to buy two complete plants each with an output of 15,000 cubic meters per year of laminated wooden beams from 12 to 40 meters long, up to 200 mm. wide and 1500 mm. high, with straight, arched, curved or saddle shapes, plus at least 125,000 running meters of triangular struts up to 15 meters long. The plant must also fabricate the necessary steel connecting elements. For more detailed specifications, interested firms should contact D. Piggot, Trade Development Assistance Division, Bureau of East-West Trade, Room 4816, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-3352.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Fisheries

09190—ITALY — Sea shells. S.I.D.A.S. is medium-sized importer & wholesaler of food & confectionery products, toys and novelties. It has 25 employees & sales territory covers all Italy and Common Market countries. WTDR of 6/74 on file; firm enjoys good reputation. Sergio Dente, Mgr., S.I.D.A.S., S.R.L., Via Procaccini 4, 20154 Milan. Cable Sidas-Milano; tel. 02-317685.

General commercial printing

27541XX—UNITED KINGDOM—Wishes contact publisher or printer of periodicals interested in obtaining intl. circulation. It is one of largest U.K. printing firms producing well known publications such as T.V. Times, Daily Telegraph color magazine, various mail order catalogs, other periodicals. Reply to—J. B. McCarthy, Technical & Marketing Dir., Eric Bemrose Ltd., 247 Tottenham Court Road, London W1P OAU. Tel. 01-580-9201; telex Liverpool 627028.

Rubber & plastics hose & belting

3041561—AUSTRALIA — Garden hose, all types. Reply to—Mr. P. C. Semmler, Asst. Product Mgr., Home Environment Products, Simpson Pope Ltd., Simpson Ave., Dudley Park, South Australia 5008. Cable Simpsonia; telex. 82152; phone 46 0211.

Glass, glassware

3229121—JAPAN — Tumbler, machine-made. Intends to distribute item to wholesalers in W. Japan. Specializes in sundry goods & electric appliances. Annual sales $4.5 million. Reply to—Nobuo Nakatsu, Import Mgr., Suita Trading Co., Ltd., Tominokoi Nino, Nakakyo Ku, Kyoto 604. Cable Suitaboeki Kyoto; tel. 075-222-1102.

Tourist agencies

47220—UPPER VOLTA—Agence Africaine de Tourisme et des Voyages (Agatour) is interested in promoting tourism in Africa, and wishes to establish collaboration with American travel agencies. Agatour arranges excursions, tours, and hunting safaris in Upper Volta and neighboring countries. Firm is newly-formed, has 13 employees and initial capital of $10,000. Interested tour operators should write to Madam Rose-Angele Nonguierma, Boite Postal 512, Bobo Dioulasso, Upper Volta, Agence Africaine de Tourisme et des Voyages (Agatour).

Future Construction Abroad

PERU—INDUPERU, State Industrial Enterprise, is taking final steps to install a **bagasse newsprint plant** in Trujillo, Northern Peru. Plant is to be completed in three years and will have annual capacity of 110,000 tons of newsprint. Project calls for investment of U.S.$38.8 million. As part of this project, INDUPERU is calling for bidders to supply a **bagasse newsprint machine.** Cost is estimated at over $8 million. Specifications can be obtained free through an authorized local representative. Authorizing letter or telex for naming local representative should be addressed to INDUPERU. It is also essential that bidders, before obtaining specifications, should indicate by letter or other document, that they have manufactured at least one newsprint making machine capable of producing newsprint of minimum 240" wide (609.4 CM). Bid deadline for submitting offers is Nov. 4. Contact address for interested firms is: Ing. Rolando Davila, Gerente del Proyecto Papel Periodico, Industris del Peru (INDUPERU), Av. Dos de Mayo 1675, Lima 27. Telex: PX-5400; Cable: INDUPERU.

SINGAPORE—Government of Singapore invites separate tenders for supply and installation of the **following mechanical, electrical, fire protection, and aluminum sub-contract works for Singapore International Airport Development Projects:** Passenger Terminal Building—internal electrical system, airconditioning and ventilation, baggage handling equipment, fire protection system, elevators and escalators, aluminum framing and glazing. Hangar—internal electrical system, elevators, compressed air system. Air Freight Terminal Building—internal electrical system, airconditioning and ventilation. Fire and Rescue Station — internal elecrical system, airconditioning, and ventilation. Interested firms must apply for prequalification registration as "Specially Registered Sub-contractors." Forms are available free of charge from: Senior Quantity Surveyor, Public Works Dept., National Development Bldg., Maxwell Rd., Singapore 2. Prequalification deadline is Nov. 19 at above office. Foreign exchange cost is ADB-funded.

COLOMBIA—The **Patia Hydroelectric Project** will consist of construction of a rockfill dam with impervious core, 240 meters high and 550 meters long, for electric power generation. Project located on Patia River in southwest. At the working zone river has total drainage area of 13.123 sq. kilometers with an average flow volume of 343 cubic meters per second. Dam's overflow level (spillway) will be of the chute type with gates designed for a maximum flow volume of 6,200 cubic meters per second. Construction of a power house is also required. Entire project will generate a total of 1540 MW at a loading factor of 40 percent. Feasibility study has been completed by the Colombian firm Hidroestudios in conjunction with Harza Engineering Co. Estimated cost amounts to about $350 million. Entire project expected to be concluded by 1983. Sources of financing have not yet been determined. Contracts for design, civil works, construction supervision, and supply of equipment will be awarded on basis of international competitive bidding. It is expected that first calls for prequalifications of firms for design study will come out within 2-3 months. Equipment to be procured will be 4 vertical axis, frances type turbines with nominal head of 210 meters, nominal flow volume of 880 cubic meters per second, and a nominal speed of 166.7 RPM; 4 ea. 405 MVA capacity generators; one 1865 MVA nominal capacity complete switchyard; transmission line between working zone and Yumbo (small town located near Cali) with a total length of 250 kilometers and 3 circuits of 500 KV; all necessary electrical equipment, transformers, control and power cables, bridge cranes, pumps, other mechanical equipment, etc. Estimated cost of equipment amounts to about 25 percent of total project cost. Contacts are: Dr. Alvaro Herrera Fernandez, Sub-Gerente Tecnico, or Dr. Juvenal Penalosa Jefe, Division de Coordinacion y Ejecucion de Projectos, both at Instituto Colombiano de Energia Electrica (ICEL), Carrera 13 No 27-00, Pios 3, Bogota.

PERU—Maquinas Herramientas Andinas, S.A. is a joint venture formed by the Government of Peru Industrial Enterprise Induperu, with 51 percent of the capital, and the Rumanian State Enterprise Uzinexportimport, with 49 percent. Firm will set up a **machine tool factory** on 68,000 square meter plant site at the new industrial park in Trujillo, as a part of a metalworking complex planned by the government. Project, planned to start operations in 1976, calls for investment of approx. $16.9 million, of which about $7 million for purchase of equipment abroad. Firm is interested in contacting U.S. companies specializing in production machinery, auxiliary machines, laboratory equipment, and material handling equipment. Copies of quantity and specifications of equipment involved in each group (in Spanish) available from U.S. Dept. of Commerce, Trade Opportunities Program, Rm. 1322, Wash., D.C. 20230. Offers covering all equipment but listing unit prices requested. Quotations should include normal and special accessories, as well as delivery and payment terms. Catalogs and informative material also requested. Specialized U.S. firms contact ASAP Maquinas Herramientas Andinas, S.A., Av. Dos de Mayo 1502 Of. 503, Lima 27. Attn: Ing. Alexandru Lintis, Asst. General Manager.

TURKEY—DSI, State Hydraulic Works, invites firms to prequalify to bid for **Oymapinar Dam and Power construction project.** Construction is valued at $60 million. Project features include: Dam-double curvature thin arch type 185 meters high and 360 meters crest length: Powerhouse: 4X135 MW units underground type (power units to be tendered separately); Diversion: single tunnel 375 meters; Spillway: two-gated horseshoe section tunnels each 350 meters long and 11.50 meters inner diameter; Switchyard: outdoor type, 38 KV; Auxiliary Dams: two concrete dams 65 meters and 40 meters high, and two grout curtains. Work includes 650,000 cubic meters dam foundation excavation and 32,000 cubic meters underground excavation: 550,000 cubic meters concrete for dam, 260,000 cubic meters concrete for structural and 90,000 cubic meters for coffer dam construction; and 160 000 meters of drilling for grouting and drainage, etc. Project financed by Turkish Government. Foreign companies required to associate with Turkish contractors and submit joint application for prequalification. Foreign companies should present company formation certification, balance sheet, letters of reference, data on similar projects completed or under way, etc. Broad experience in grouting treatment in carstic areas essential. Experience, responsibility of each company in joint venture to be specified. Foreign firms will be pilot firm. All documents to be certified. Prequalification requirement and project details available to local representative free of charge from DSI: Devlet Su Isleri Genel Mudurlugu, Barajlar ve H.E. Santrallar Dairesi Baskanligi, Yucetepe, Ismet Inonu Bulvari, Ankara or from consulting engineer Coyne et Belier, Bureau d'Ingeniurs Conseils 19, Re Alphone de Neuville, Paris 017, France. Prequalification deadline Nov. 15.

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